

README.md - Grip

Errors 02/14/2020

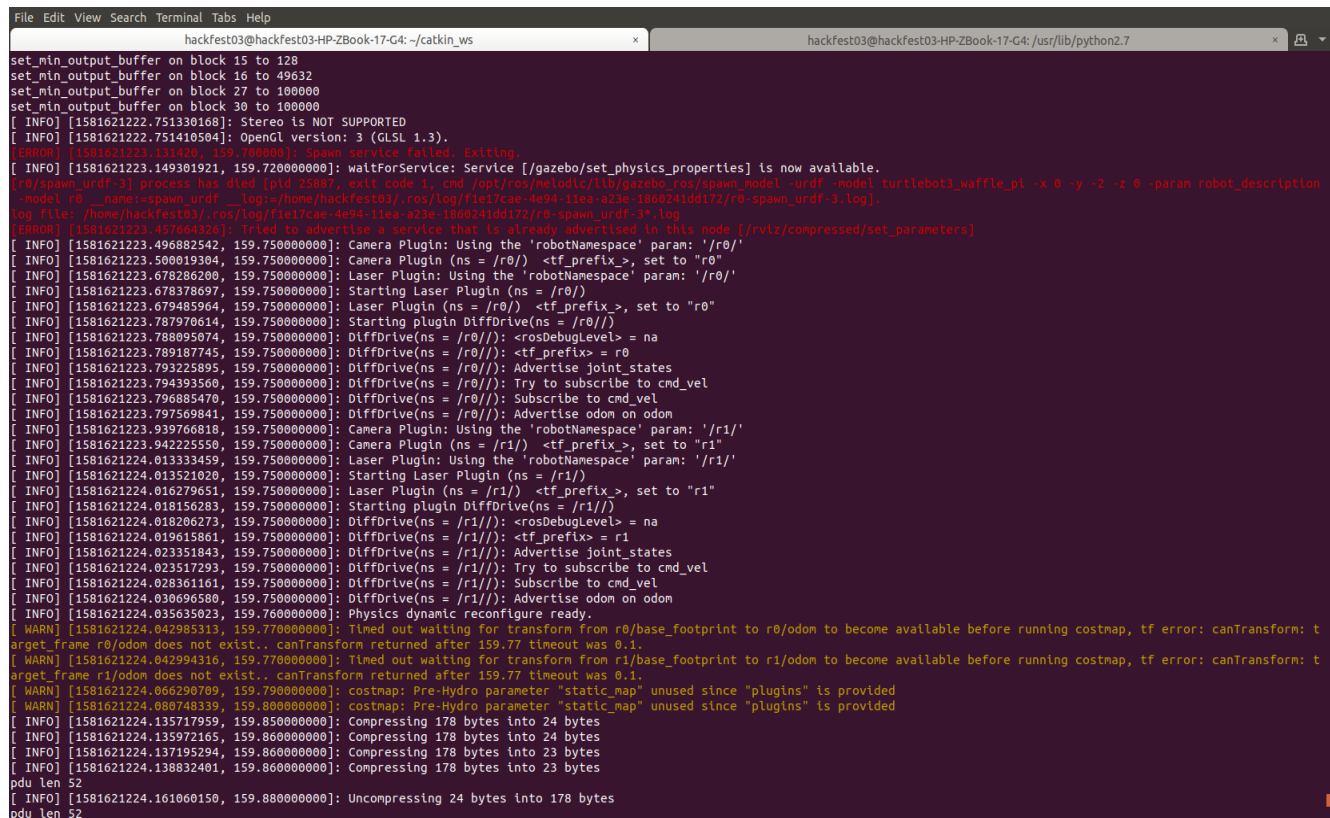
Problems

There seem to appear some errors on the terminal when you try to execute the following commands:

```
roslaunch era_gazebo era_melodic.launch
```

```
roslaunch era_gazebo era_playback_melodic.launch bag_name:=/home/hackfest03/catkin_ws/src/era_gazebo/bagfiles/cmd_vel_r0.bag
```

Example 1:



```
File Edit View Search Terminal Tabs Help
hackfest03@hackfest03-HP-ZBook-17-G4: ~/catkin_ws
set_min_output_buffer on block 15 to 128
set_min_output_buffer on block 16 to 49632
set_min_output_buffer on block 27 to 100000
set_min_output_buffer on block 30 to 100000
[ INFO] [1581621222.751330168]: Stereo is NOT SUPPORTED
[ INFO] [1581621222.75140504]: OpenGL version: 3 (GLSL 1.3).
[ERROR] [1581621223.131420, 159.70000000]: Spawn service failed. Exiting.
[ INFO] [1581621223.149301921, 159.720000000]: waitForService: Service [/gazebo/set_physics_properties] is now available.
[r0/spawn_urdf-3] process has died [pid 25087, exit code 1, cmd /opt/ros/melodic/lib/gazebo_ros/spawn_model -urdf -model turtlebot3_waffle_pi -x 0 -y -2 -z 0 -param robot_description
-log file: /home/hackfest03/.ros/log/Tie17cae-4e94-11ea-a23e-1800241dd172/r0-spawn_urdf-3.log].
[ERROR] [1581621223.475644226]: Failed to advertise a service that is already advertised in this node [/rviz/compressed/set_parameters]
[ INFO] [1581621223.496802542, 159.750000000]: Camera Plugin: Using the 'robotNamespace' param: '/r0/'
[ INFO] [1581621223.508019304, 159.750000000]: Camera Plugin (ns = /r0/) <tf_prefix>, set to 'r0'
[ INFO] [1581621223.67826200, 159.750000000]: Laser Plugin: Using the 'robotNamespace' param: '/r0/'
[ INFO] [1581621223.678378697, 159.750000000]: Starting Laser Plugin (ns = /r0/)
[ INFO] [1581621223.679485964, 159.750000000]: Laser Plugin (ns = /r0/) <tf_prefix>, set to 'r0'
[ INFO] [1581621223.787970614, 159.750000000]: Starting plugin DiffDrive(ns = /r0/)
[ INFO] [1581621223.788095074, 159.750000000]: DiffDrive(ns = /r0/): <rosDebugLevel> = na
[ INFO] [1581621223.789187745, 159.750000000]: DiffDrive(ns = /r0/): <tf_prefix> = r0
[ INFO] [1581621223.793225895, 159.750000000]: DiffDrive(ns = /r0/): Advertise joint_states
[ INFO] [1581621223.794393560, 159.750000000]: DiffDrive(ns = /r0/): Try to subscribe to cmd_vel
[ INFO] [1581621223.796885470, 159.750000000]: DiffDrive(ns = /r0/): Subscribe to cmd_vel
[ INFO] [1581621223.797569841, 159.750000000]: DiffDrive(ns = /r0/): Advertise odom on odom
[ INFO] [1581621223.939766818, 159.750000000]: Camera Plugin: Using the 'robotNamespace' param: '/r1/'
[ INFO] [1581621223.942225550, 159.750000000]: Camera Plugin (ns = /r1/) <tf_prefix>, set to 'r1'
[ INFO] [1581621224.013333459, 159.750000000]: Laser Plugin: Using the 'robotNamespace' param: '/r1/'
[ INFO] [1581621224.013521020, 159.750000000]: Starting Laser Plugin (ns = /r1/)
[ INFO] [1581621224.016279651, 159.750000000]: Laser Plugin (ns = /r1/) <tf_prefix>, set to 'r1'
[ INFO] [1581621224.018156283, 159.750000000]: Starting plugin DiffDrive(ns = /r1/)
[ INFO] [1581621224.018266273, 159.750000000]: DiffDrive(ns = /r1/): <rosDebugLevel> = na
[ INFO] [1581621224.019615861, 159.750000000]: DiffDrive(ns = /r1/): <tf_prefix> = r1
[ INFO] [1581621224.023351843, 159.750000000]: DiffDrive(ns = /r1/): Advertise joint_states
[ INFO] [1581621224.023517293, 159.750000000]: DiffDrive(ns = /r1/): Try to subscribe to cmd_vel
[ INFO] [1581621224.028361161, 159.750000000]: DiffDrive(ns = /r1/): Subscribe to cmd_vel
[ INFO] [1581621224.030696580, 159.750000000]: DiffDrive(ns = /r1/): Advertise odom on odom
[ INFO] [1581621224.035635023, 159.760000000]: Physics dynamic reconfigure ready.
[ WARN] [1581621224.042985313, 159.770000000]: Timed out waiting for transform from r0/base_footprint to r0/odom to become available before running costmap, tf error: canTransform: t
arget_frame r0/odom does not exist.. canTransform returned after 159.77 timeout was 0.1.
[ WARN] [1581621224.042994316, 159.770000000]: Timed out waiting for transform from r1/base_footprint to r1/odom to become available before running costmap, tf error: canTransform: t
arget_frame r1/odom does not exist.. canTransform returned after 159.77 timeout was 0.1.
[ WARN] [1581621224.066290709, 159.790000000]: costmap: Pre-Hydro parameter "static_map" unused since "plugins" is provided
[ WARN] [1581621224.088748339, 159.800000000]: costmap: Pre-Hydro parameter "static_map" unused since "plugins" is provided
[ INFO] [1581621224.135717959, 159.850000000]: Compressing 178 bytes into 24 bytes
[ INFO] [1581621224.135972165, 159.860000000]: Compressing 178 bytes into 24 bytes
[ INFO] [1581621224.137195294, 159.860000000]: Compressing 178 bytes into 23 bytes
[ INFO] [1581621224.138032401, 159.860000000]: Compressing 178 bytes into 23 bytes
pdu len 52
[ INFO] [1581621224.161060150, 159.880000000]: Uncompressing 24 bytes into 178 bytes
pdu len 52
```

Example 2:

```

File Edit View Search Terminal Tabs Help
hackfest03@hackfest03-HP-ZBook-17-G4: ~/catkin_ws
[ INFO] [1581626646.826166864]: waitForService: Service [/gazebo/set_physics_properties] has not been advertised, waiting...
[ INFO] [1581626646.873249625]: Stereo is NOT SUPPORTED
[ INFO] [1581626646.873330761]: OpenGL version: 3 (GLSL 1.3).
[ERROR] [1581626647.348466, 159.760000000]: Spawn service failed. Exiting.
[ INFO] [1581626647.367522517, 159.720000000]: waitForService: Service [/gazebo/set_physics_properties] is now available.
[ INFO] [1581626647.385751308, 159.730000000]: Physics dynamic reconfigure ready.
[r0/spawn_urdf-4] process has died [pid 25255, exit code 1, cmd /opt/ros/melodic/lib/gazebo_ros/spawn_model -urdf -model turtlebot3_waffle_pi -x 0 -y -2 -z 0 -param robot_description
model ro _name:=spawn_urdf __log:=/home/hackfest03/.ros/log/9ac56f76-4e93-11ea-a23e-1860241dd172/r0-spawn_urdf-4.log].
log file: /home/hackfest03/.ros/log/9ac56f76-4e93-11ea-a23e-1860241dd172/r0-spawn_urdf-4.log
[ERROR] [1581626647.687704576]: Tried to advertise a service that is already advertised in this node [/rviz/compressed/set_parameters]
[ INFO] [1581626647.809675987, 159.750000000]: Camera Plugin: Using the 'robotNamespace' param: '/r0/'
[ INFO] [1581626647.812895348, 159.750000000]: Camera Plugin (ns = /r0/) <tf_prefix>, set to "r0"
[ INFO] [1581626647.941536887, 159.750000000]: Laser Plugin: Using the 'robotNamespace' param: '/r0/'
[ INFO] [1581626647.941631197, 159.750000000]: Starting Laser Plugin (ns = /r0/)
[ INFO] [1581626647.943312766, 159.750000000]: Laser Plugin (ns = /r0/) <tf_prefix>, set to "r0"
[ INFO] [1581626648.048090554, 159.750000000]: Starting plugin DiffDrive(ns = /r0/)
[ INFO] [1581626648.048232278, 159.750000000]: DiffDrive(ns = /r0/): <rosDebugLevel> = na
[ INFO] [1581626648.049091635, 159.750000000]: DiffDrive(ns = /r0/): <tf_prefix> = r0
[ INFO] [1581626648.050137689, 159.750000000]: DiffDrive(ns = /r0/): Advertise joint_states
[ INFO] [1581626648.050948829, 159.750000000]: DiffDrive(ns = /r0/): Try to subscribe to cmd_vel
[ INFO] [1581626648.052638749, 159.750000000]: DiffDrive(ns = /r0/): Subscribe to cmd_vel
[ INFO] [1581626648.053280811, 159.750000000]: DiffDrive(ns = /r0/): Advertise odom on odom
[ WARN] [1581626648.077754367, 159.770000000]: Timed out waiting for transform from r0/base_footprint to r0/odom to become available before running costmap, tf error: canTransform: t
arget_frame r0/odom does not exist... canTransform returned after 159.77 timeout was 0.1.
[ WARN] [1581626648.077851723, 159.770000000]: Timed out waiting for transform from r1/base_footprint to r1/odom to become available before running costmap, tf error: canTransform: t
arget_frame r1/odom does not exist... canTransform returned after 159.77 timeout was 0.1.
[ INFO] [1581626648.167799346, 159.860000000]: Compressing 178 bytes into 24 bytes
[ INFO] [1581626648.168086053, 159.860000000]: Compressing 178 bytes into 24 bytes
[ INFO] [1581626648.168981856, 159.860000000]: Compressing 178 bytes into 23 bytes
[ INFO] [1581626648.169270368, 159.860000000]: Compressing 178 bytes into 23 bytes
pdu len 52
[ INFO] [1581626648.192429544, 159.880000000]: Uncompressing 24 bytes into 178 bytes
[ERROR] [1581626648.192697203, 159.880000000]: r1
pdu len 52
[ INFO] [1581626648.201612169, 159.890000000]: Uncompressing 24 bytes into 178 bytes
[ERROR] [1581626648.201830934, 159.890000000]: r0
pdu len 51
[ INFO] [1581626648.252938985, 159.940000000]: Uncompressing 23 bytes into 178 bytes
[ INFO] [1581626648.268279423, 159.960000000]: Compressing 178 bytes into 24 bytes
[ INFO] [1581626648.268627290, 159.960000000]: Compressing 178 bytes into 24 bytes
[ WARN] [1581626648.271886713, 159.960000000]: costmap: Pre-Hydro parameter "static_map" unused since "plugins" is provided
pdu len 52
[ INFO] [1581626648.299965901, 159.960000000]: Uncompressing 24 bytes into 178 bytes
pdu len 52
[ INFO] [1581626648.302874942, 159.960000000]: Uncompressing 24 bytes into 178 bytes
[ INFO] [1581626648.422230250, 159.960000000]: Camera Plugin: Using the 'robotNamespace' param: '/r1/'
[ INFO] [1581626648.424760500, 159.960000000]: Camera Plugin (ns = /r1/) <tf_prefix>, set to "r1"
[ INFO] [1581626648.565270419, 159.960000000]: Laser Plugin: Using the 'robotNamespace' param: '/r1/'
[ INFO] [1581626648.565373752, 159.960000000]: Starting Laser Plugin (ns = /r1/)
[ INFO] [1581626648.565373752, 159.960000000]: Laser Plugin (ns = /r1/) <tf_prefix>, set to "r1"
[ERROR] [1581626648.566454717, 159.960000000]: SpawnModel: Failure - model name r1 already exist.
[ INFO] [1581626648.568040134, 159.960000000]: Starting plugin DiffDrive(ns = /r1/)
[ INFO] [1581626648.568077335, 159.960000000]: DiffDrive(ns = /r1/): <rosDebugLevel> = na
[ERROR] [1581626648.568111801, 159.960000000]: SpawnModel: Failure - model name r0 already exist.
[ERROR] [1581626648.568289301, 159.960000000]: r1
[ERROR] [1581626648.568485409, 159.960000000]: r0
[ INFO] [1581626648.571175537, 159.960000000]: DiffDrive(ns = /r1/): <tf_prefix> = r1
[ERROR] [1581626648.571434676, 159.960000000]: SpawnModel: Failure - model name r0 already exist.
[ERROR] [1581626648.571600940, 159.960000000]: r0
[ERROR] [1581626648.571729191, 159.960000000]: SpawnModel: Failure - model name r1 already exist.
[ INFO] [1581626648.574417954, 159.960000000]: DiffDrive(ns = /r1/): Advertise joint_states
[ INFO] [1581626648.574921354, 159.960000000]: DiffDrive(ns = /r1/): Try to subscribe to cmd_vel
[ERROR] [1581626648.576896422, 159.960000000]: SpawnModel: Failure - model name r0 already exist.
[ INFO] [1581626648.583682847, 159.960000000]: DiffDrive(ns = /r1/): Subscribe to cmd_vel
[ INFO] [1581626648.584342220, 159.960000000]: DiffDrive(ns = /r1/): Advertise odom on odom
[ WARN] [1581626648.630197181, 160.010000000]: costmap: Pre-Hydro parameter "static_map" unused since "plugins" is provided
[ INFO] [1581626648.678396732, 160.060000000]: Compressing 178 bytes into 24 bytes
[ INFO] [1581626648.678964299, 160.060000000]: Compressing 10192 bytes into 187 bytes
pdu len 52
[ INFO] [1581626648.714327096, 160.090000000]: Uncompressing 24 bytes into 178 bytes
pdu len 215
[ INFO] [1581626648.722288585, 160.180000000]: Uncompressing 187 bytes into 10192 bytes
[ INFO] [1581626648.778118169, 160.160000000]: Compressing 10192 bytes into 187 bytes
[ INFO] [1581626648.779601486, 160.160000000]: Compressing 178 bytes into 24 bytes
pdu len 52
[ INFO] [1581626648.812156412, 160.180000000]: Uncompressing 24 bytes into 178 bytes
[r1/spawn_urdf-14] process has finished cleanly
log file: /home/hackfest03/.ros/log/9ac56f76-4e93-11ea-a23e-1860241dd172/r1-spawn_urdf-14*.log
pdu len 215
[ INFO] [1581626648.828424765, 160.190000000]: Uncompressing 187 bytes into 10192 bytes
[ INFO] [1581626648.883534014, 160.260000000]: Compressing 178 bytes into 24 bytes
[ INFO] [1581626648.883796174, 160.260000000]: Compressing 10192 bytes into 187 bytes
pdu len 52
[ INFO] [1581626648.916316641, 160.290000000]: Uncompressing 24 bytes into 178 bytes
pdu len 215
[ INFO] [1581626648.927285570, 160.300000000]: Uncompressing 187 bytes into 10192 bytes
[ INFO] [1581626648.984754170, 160.360000000]: Compressing 10192 bytes into 255 bytes
[ INFO] [1581626648.985579455, 160.360000000]: Compressing 10192 bytes into 187 bytes
pdu len 283
[ INFO] [1581626649.028670118, 160.400000000]: Uncompressing 255 bytes into 10192 bytes

```

Example 3:

```

File Edit View Search Terminal Tabs Help
hackfest03@hackfest03-HP-ZBook-17-G4: ~/catkin_ws
[ WARN] [1581626648.271886713, 159.960000000]: costmap: Pre-Hydro parameter "static_map" unused since "plugins" is provided
pdu len 52
[ INFO] [1581626648.299965901, 159.960000000]: Uncompressing 24 bytes into 178 bytes
pdu len 52
[ INFO] [1581626648.302874942, 159.960000000]: Uncompressing 24 bytes into 178 bytes
[ INFO] [1581626648.422230250, 159.960000000]: Camera Plugin: Using the 'robotNamespace' param: '/r1/'
[ INFO] [1581626648.424760500, 159.960000000]: Camera Plugin (ns = /r1/) <tf_prefix>, set to "r1"
[ INFO] [1581626648.565270419, 159.960000000]: Laser Plugin: Using the 'robotNamespace' param: '/r1/'
[ INFO] [1581626648.565373752, 159.960000000]: Starting Laser Plugin (ns = /r1/)
[ INFO] [1581626648.565373752, 159.960000000]: Laser Plugin (ns = /r1/) <tf_prefix>, set to "r1"
[ERROR] [1581626648.566454717, 159.960000000]: SpawnModel: Failure - model name r1 already exist.
[ INFO] [1581626648.568040134, 159.960000000]: Starting plugin DiffDrive(ns = /r1/)
[ INFO] [1581626648.568077335, 159.960000000]: DiffDrive(ns = /r1/): <rosDebugLevel> = na
[ERROR] [1581626648.568111801, 159.960000000]: SpawnModel: Failure - model name r0 already exist.
[ERROR] [1581626648.568289301, 159.960000000]: r1
[ERROR] [1581626648.568485409, 159.960000000]: r0
[ INFO] [1581626648.571175537, 159.960000000]: DiffDrive(ns = /r1/): <tf_prefix> = r1
[ERROR] [1581626648.571434676, 159.960000000]: SpawnModel: Failure - model name r0 already exist.
[ERROR] [1581626648.571600940, 159.960000000]: r0
[ERROR] [1581626648.571729191, 159.960000000]: SpawnModel: Failure - model name r1 already exist.
[ INFO] [1581626648.574417954, 159.960000000]: DiffDrive(ns = /r1/): Advertise joint_states
[ INFO] [1581626648.574921354, 159.960000000]: DiffDrive(ns = /r1/): Try to subscribe to cmd_vel
[ERROR] [1581626648.576896422, 159.960000000]: SpawnModel: Failure - model name r0 already exist.
[ INFO] [1581626648.583682847, 159.960000000]: DiffDrive(ns = /r1/): Subscribe to cmd_vel
[ INFO] [1581626648.584342220, 159.960000000]: DiffDrive(ns = /r1/): Advertise odom on odom
[ WARN] [1581626648.630197181, 160.010000000]: costmap: Pre-Hydro parameter "static_map" unused since "plugins" is provided
[ INFO] [1581626648.678396732, 160.060000000]: Compressing 178 bytes into 24 bytes
[ INFO] [1581626648.678964299, 160.060000000]: Compressing 10192 bytes into 187 bytes
pdu len 52
[ INFO] [1581626648.714327096, 160.090000000]: Uncompressing 24 bytes into 178 bytes
pdu len 215
[ INFO] [1581626648.722288585, 160.180000000]: Uncompressing 187 bytes into 10192 bytes
[ INFO] [1581626648.778118169, 160.160000000]: Compressing 10192 bytes into 187 bytes
[ INFO] [1581626648.779601486, 160.160000000]: Compressing 178 bytes into 24 bytes
pdu len 52
[ INFO] [1581626648.812156412, 160.180000000]: Uncompressing 24 bytes into 178 bytes
[r1/spawn_urdf-14] process has finished cleanly
log file: /home/hackfest03/.ros/log/9ac56f76-4e93-11ea-a23e-1860241dd172/r1-spawn_urdf-14*.log
pdu len 215
[ INFO] [1581626648.828424765, 160.190000000]: Uncompressing 187 bytes into 10192 bytes
[ INFO] [1581626648.883534014, 160.260000000]: Compressing 178 bytes into 24 bytes
[ INFO] [1581626648.883796174, 160.260000000]: Compressing 10192 bytes into 187 bytes
pdu len 52
[ INFO] [1581626648.916316641, 160.290000000]: Uncompressing 24 bytes into 178 bytes
pdu len 215
[ INFO] [1581626648.927285570, 160.300000000]: Uncompressing 187 bytes into 10192 bytes
[ INFO] [1581626648.984754170, 160.360000000]: Compressing 10192 bytes into 255 bytes
[ INFO] [1581626648.985579455, 160.360000000]: Compressing 10192 bytes into 187 bytes
pdu len 283
[ INFO] [1581626649.028670118, 160.400000000]: Uncompressing 255 bytes into 10192 bytes

```

Files needed

- On the [Mini-ERA \(Standalone version\)](#), when you try to download the video file sample, an IBM user restriction appears:

Installation

```
$ git clone https://github.com/IBM/era.git
$ cd era/mini-era
$ mkdir build
$ cd build
$ cmake ..
$ make
```

you should now have an executable called `mini-era`

You can download a [sample video file](#) and run it with the following command:

```
mini-era sample_video.mp4
```

- On the [Mini-ERA \(ROS version\)](#), when you try to download the bag file to reproduce the environment, you find the same IBM user restriction:

Installation

Mini-ERA is in `era_gazebo` package. You can download it [here](#)

In addition to ERA's requirements Mini-ERA requires tensorflow and tensorflow detection models.

You can find installation instructions in

- [Here for tensorflow](#) IF you have a CUDA capable GPU, installing tensorflow-gpu will make the detection much faster.
- We use some helper functions of tensorflow models. Clone [detection models](#) and place them in your computer (Remember the folder where you put them).
- Download the object detection model that you would like to use. By default we use [ssd_mobilenet_v1_coco](#). Download the model that you want to use from the [detection zoo](#).
- Extract the object detection model into `era_gazebo/models` folder
- Download the [bagfile](#) and place it in `era_gazebo/bagfiles` folder