rostopic echo /RosAria/pose angular: x: 0.0 y: 0.0 to z: 0.938987137573 _n header: seq: 5651 stamp: secs: 0 et nsecs: 0 frame id: odom child_frame_id: base_link pose: a pose: position: er x: -5.501 y: 0.067 se z: 0.0 e fii orientation: x: 0.0 er y: 0.0 z: 0.997452364737 w: 0.0713356858911 ies twist: twist: oi(linear: x: 0.101 y: 0.0 z: 0.0 e: angular: _f) x: 0.0 y: 0.0 z: 1.07861347773

student@autonomous-systems:~ \$ rostopic echo /parameter_updates
WARNING: topic [/parameter_updates] does not appear to be published yet
^Cstudent@autonomous-systems:~ \$ rostopic echo /parameter_description
WARNING: topic [/parameter_description] does not appear to be published yet

rostopic echo /tf

```
transforms:

header:
seq: 0
stamp:
secs: 0
nsecs: 0
frame_id: odom
child_frame_id: base_link
transform:
translation:
x: -5.358
y: -0.106
z: 0.0
rotation:
x: 0.0
y: 0.0
z: -0.52444883577
w: 0.851441964352
```

Visualize robot in scene student@autonomous-systems:~ \$ rosrun rviz rviz

Python program to listen

Position -0.015 -0.011 Orientation 0.167506611302 0.985870952595

Position

Χ

Υ

Orientation

Ζ

W

Python read_all.py

TF Position
-0.029
0.058
TF Orientation
-0.608824248064
0.793305133583

Pose Position
-0.029
0.058
Pose Orientation
-0.608824248064
0.793305133583