



Hochschule
Bonn-Rhein-Sieg
University of Applied Sciences



ROS Nodes, Topics, and Messages

Foundation Course

August 27, 2019

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1. Recap

2. ROS nodes in Python

2.1 A simple ROS node in Python

2.2 Writing a publisher node in Python

2.3 creating a package



Recap

Summary of yesterday's session

- ROS is a collection of libraries and tools that helps you when you develop software for robots.
- ROS provides several ways to transfer data between nodes:
 1. ROS topics and messages (**publish/subscribe**).
 2. ROS services (**request/reply**).
 3. ROS actions (**request/reply**).
 4. Parameter server.

Recap

Summary of yesterday's session

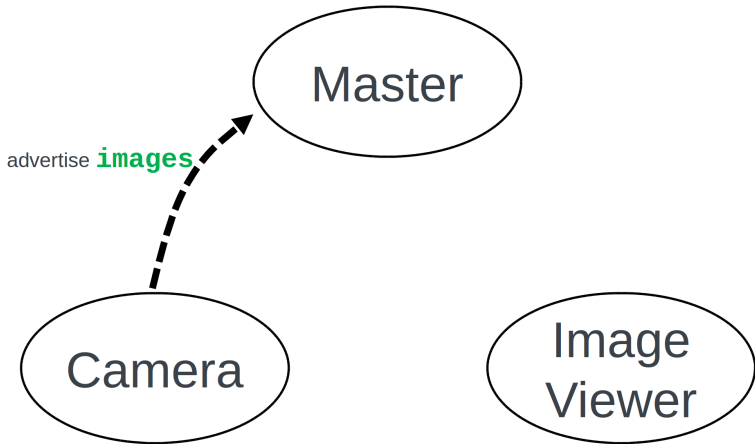
- We will focus today on the ROS topics and messages..

```
graph TD; Master([Master]); Camera([Camera]); ImageViewer([Image Viewer]);
```

Master

Camera

Image
Viewer







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A simple ROS node

```
#!/usr/bin/env python

import rospy
from time import sleep

rospy.init_node("print_text")

while True:
    print "Hello world!"
    sleep(1)
```

A simple ROS node

```
#!/usr/bin/env python

import rospy

rospy.init_node("print_text")
rate = rospy.Rate(1)

while not rospy.is_shutdown():
    print "Hello world!"
    rate.sleep()
```

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ROS Nodes

