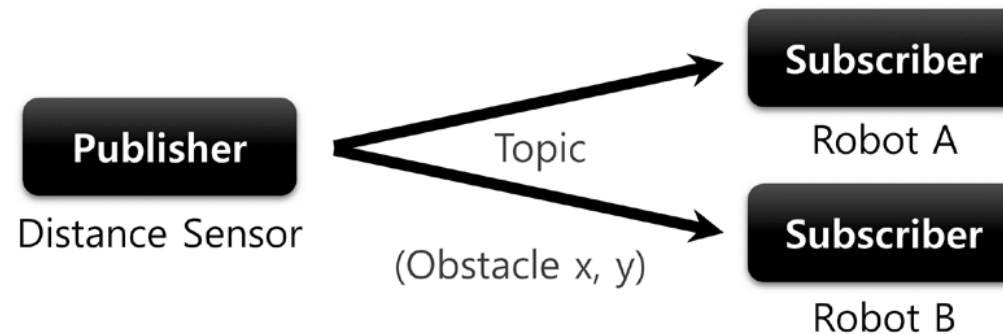
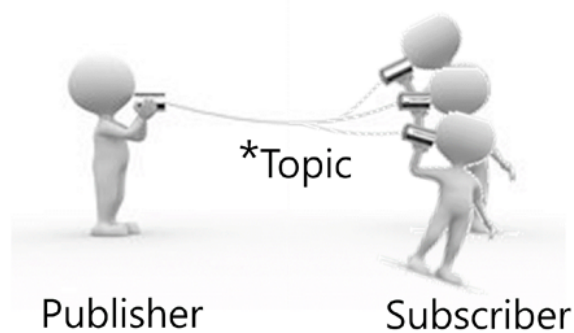
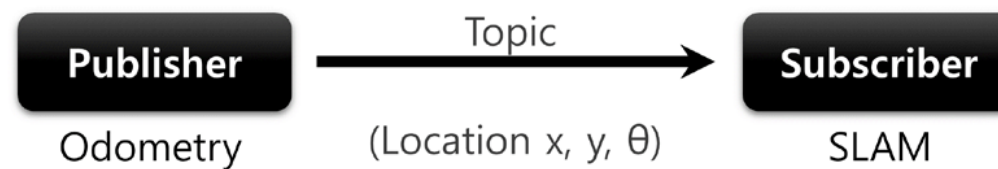
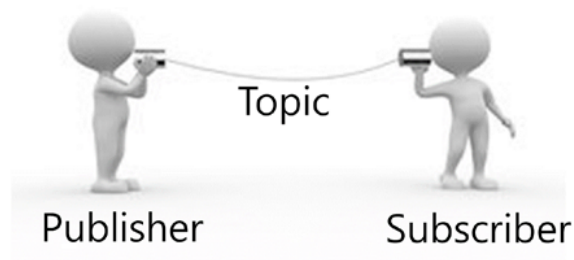
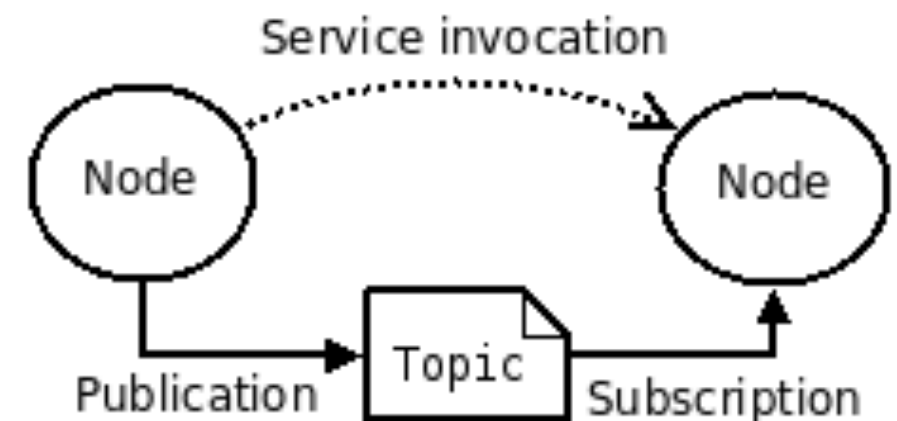


Topic

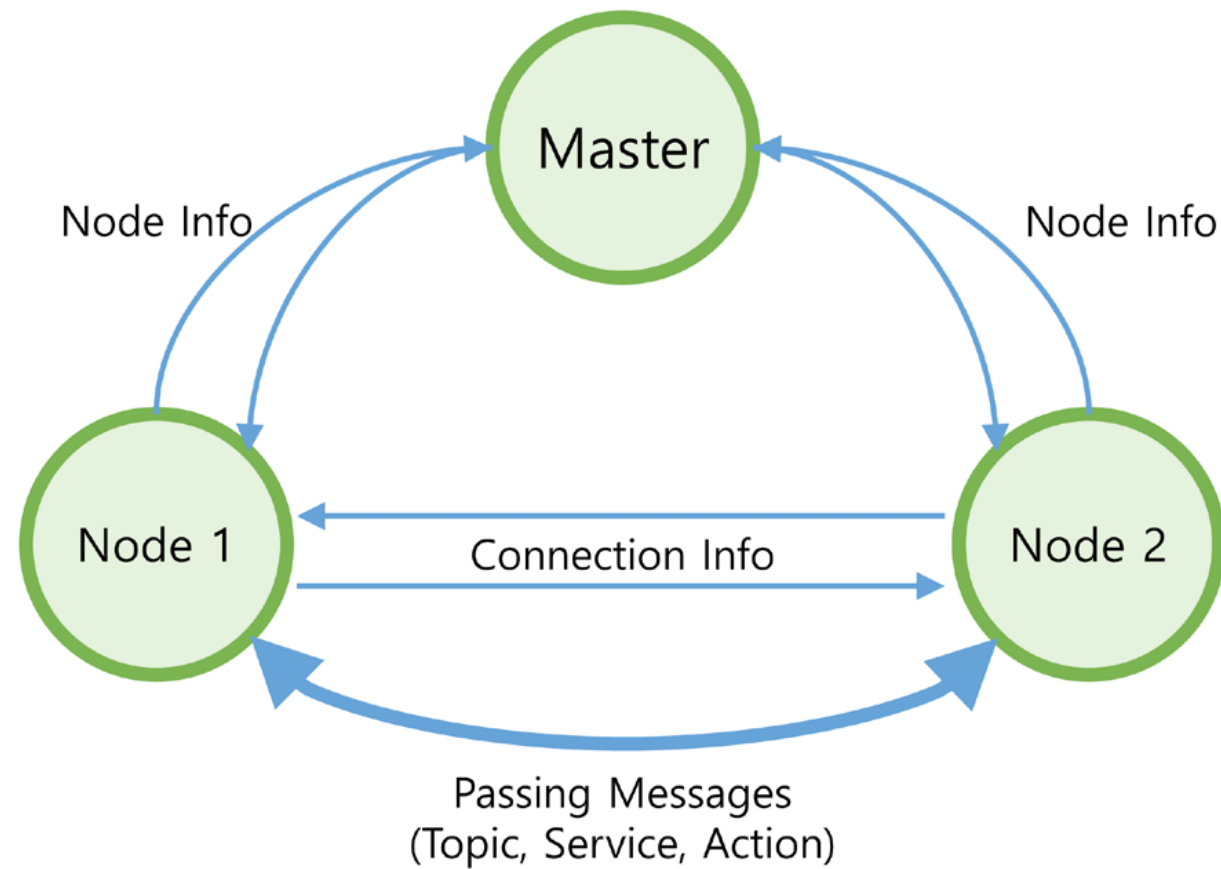


*Topic not only allows 1:1 Publisher and Subscriber communication, but also supports 1:N, N:1 and N:N depending on the purpose.

Reference Book: **ROS Robot Programming** (in English).
Authors: Yoonseok Pyo, Hancheol Cho, Leon Jung, Darby Lim



Message Communication



Reference Book: **ROS Robot Programming** (in English).
Authors: Yoonseok Pyo, Hancheol Cho, Leon Jung, Darby Lim

1: Run the Master ROS Node

```
$ roscore
```

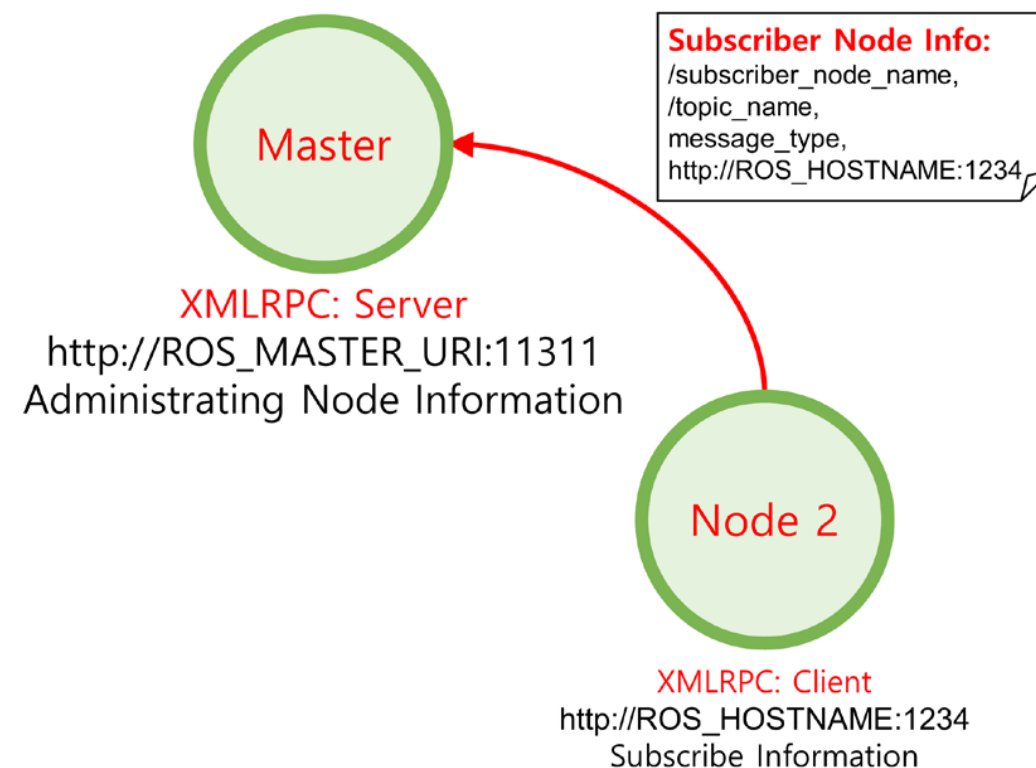


XMLRPC: Server
http://ROS_MASTER_URI:11311
Adminstrating Node Information

Reference Book: **ROS Robot Programming** (in English).
Authors: Yoonseok Pyo, Hancheol Cho, Leon Jung, Darby Lim

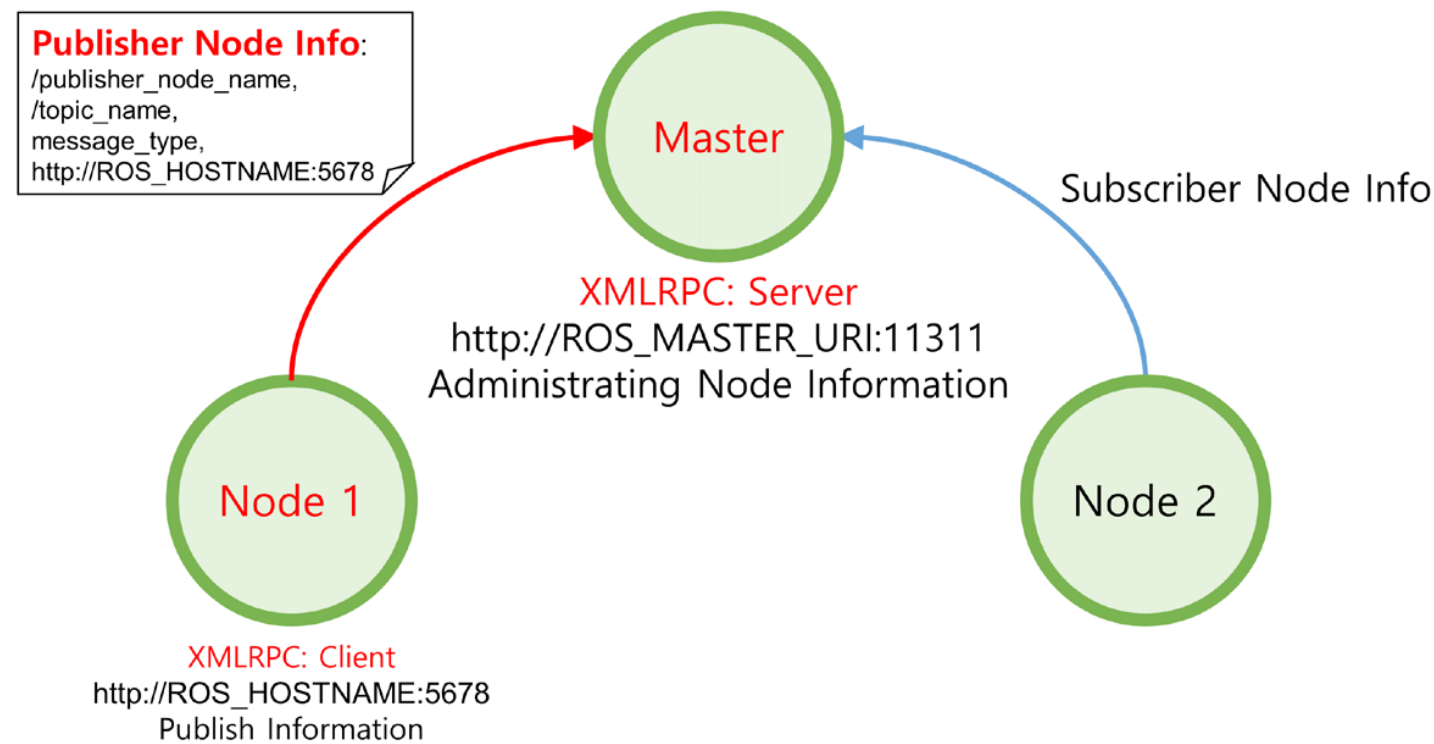
2: Running the Subscriber

```
$ rosrun PACKAGE_NAME NODE_NAME  
$ roslaunch PACKAGE_NAME LAUNCH_NAME
```



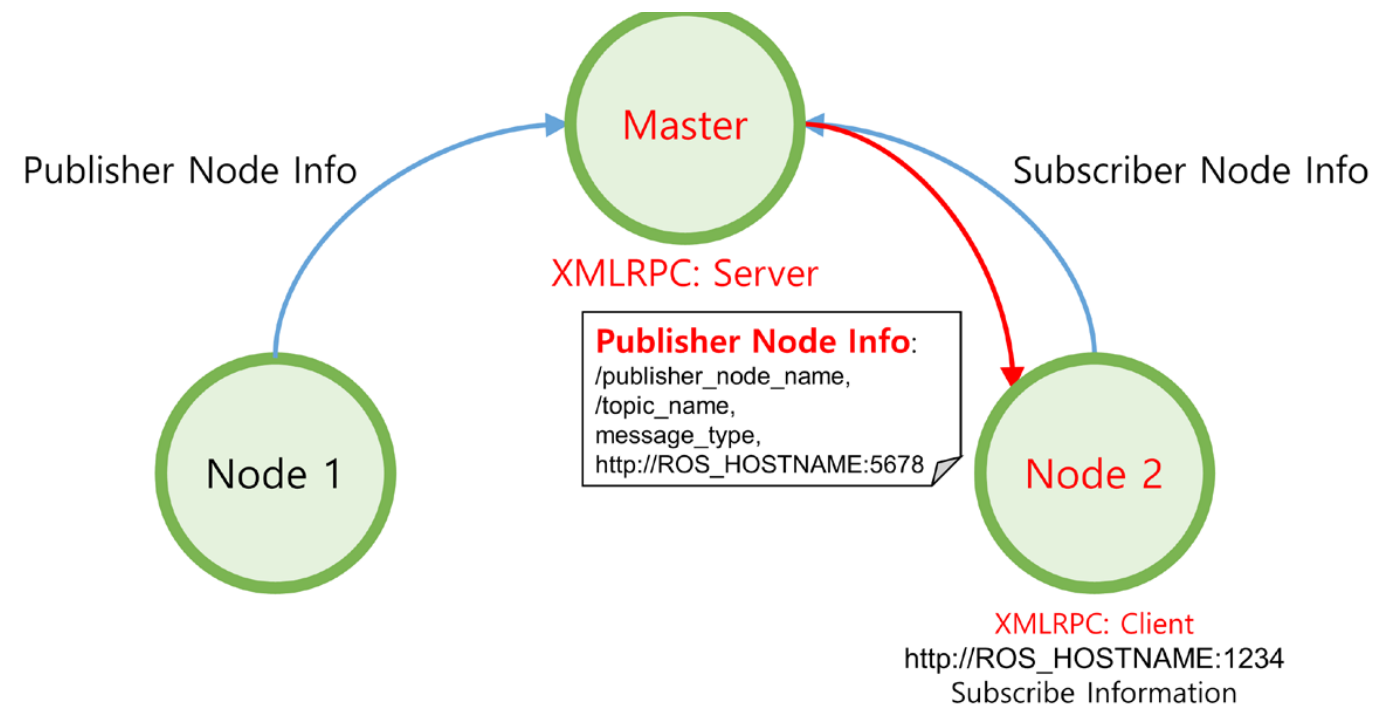
Reference Book: **ROS Robot Programming** (in English).
Authors: Yoonseok Pyo, Hancheol Cho, Leon Jung, Darby Lim

3: Running the Publisher



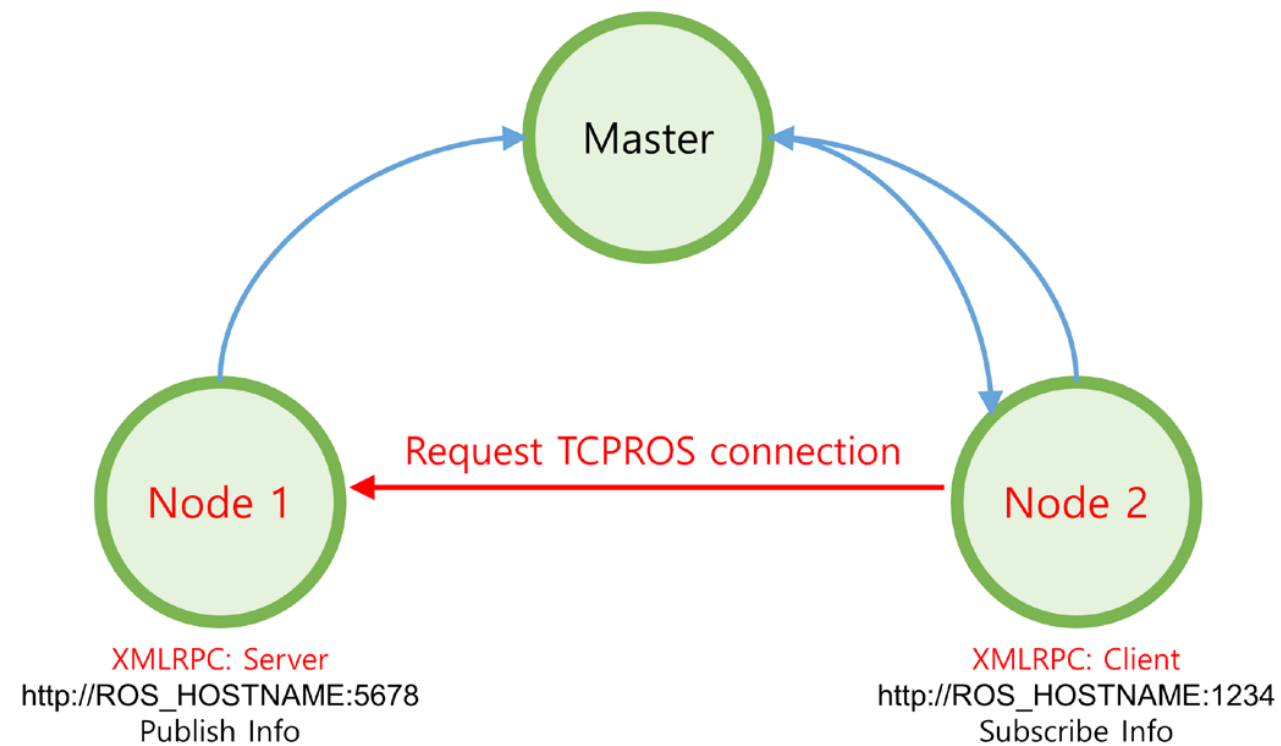
Reference Book: **ROS Robot Programming** (in English).
Authors: Yoonseok Pyo, Hancheol Cho, Leon Jung, Darby Lim

4: Provide Publisher Info



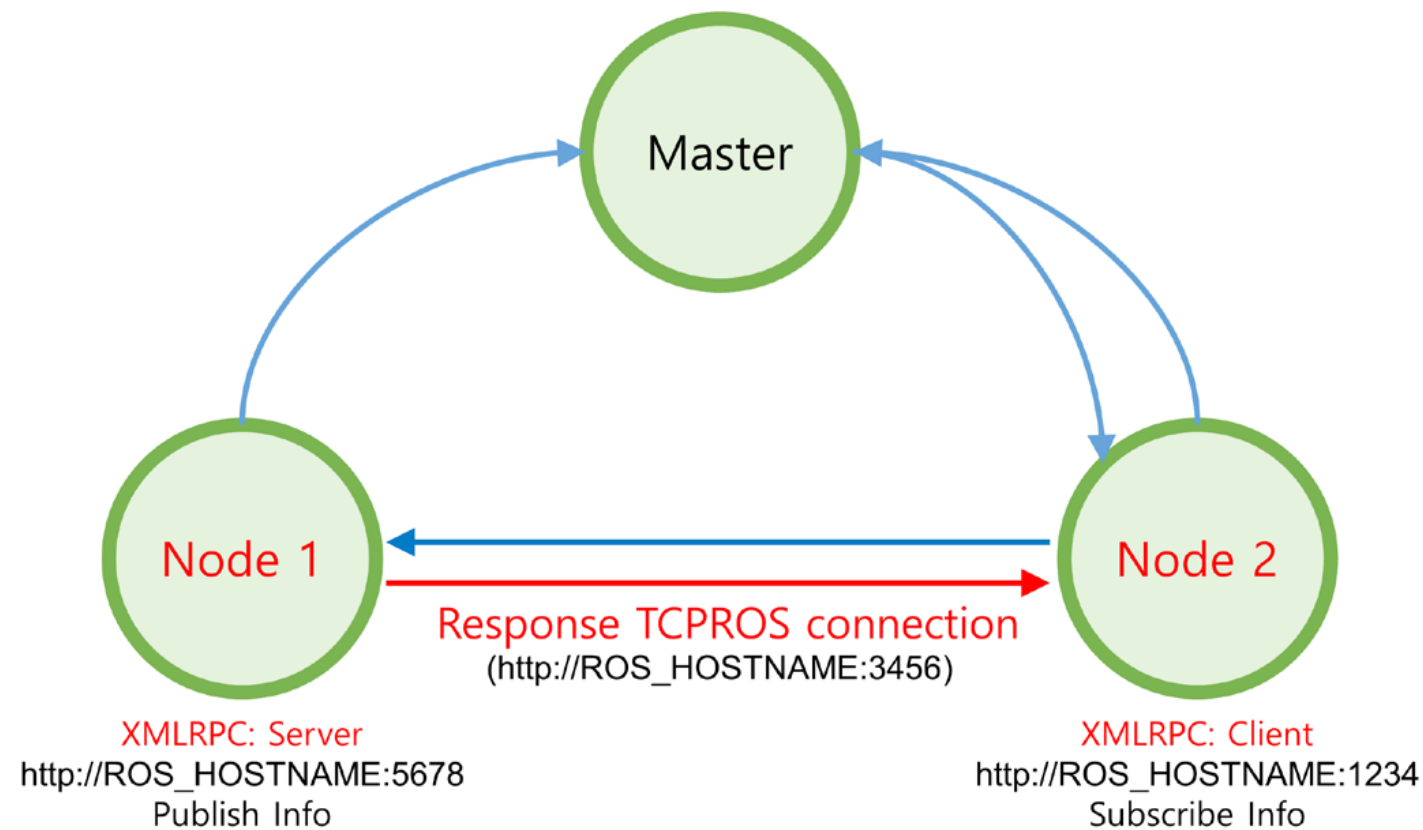
Reference Book: **ROS Robot Programming** (in English).
Authors: Yoonseok Pyo, Hancheol Cho, Leon Jung, Darby Lim

5: Establish Connection Request



Reference Book: **ROS Robot Programming** (in English).
Authors: Yoonseok Pyo, Hancheol Cho, Leon Jung, Darby Lim

6: Connection Response

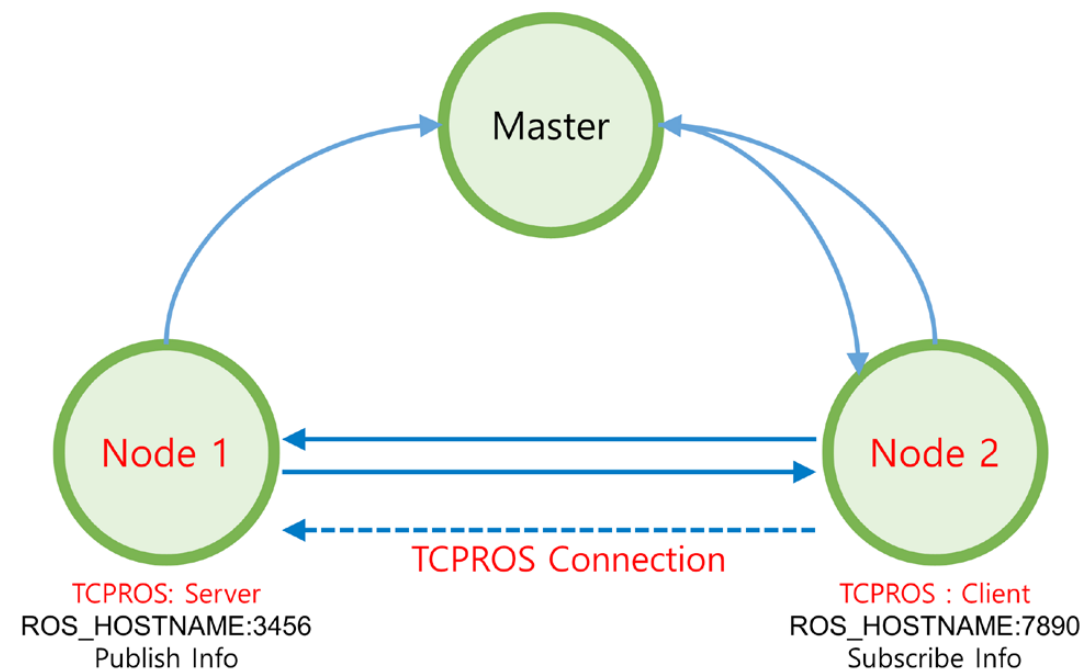


Reference Book: **ROS Robot Programming** (in English).
Authors: Yoonseok Pyo, Hancheol Cho, Leon Jung, Darby Lim

7: TCP Connection

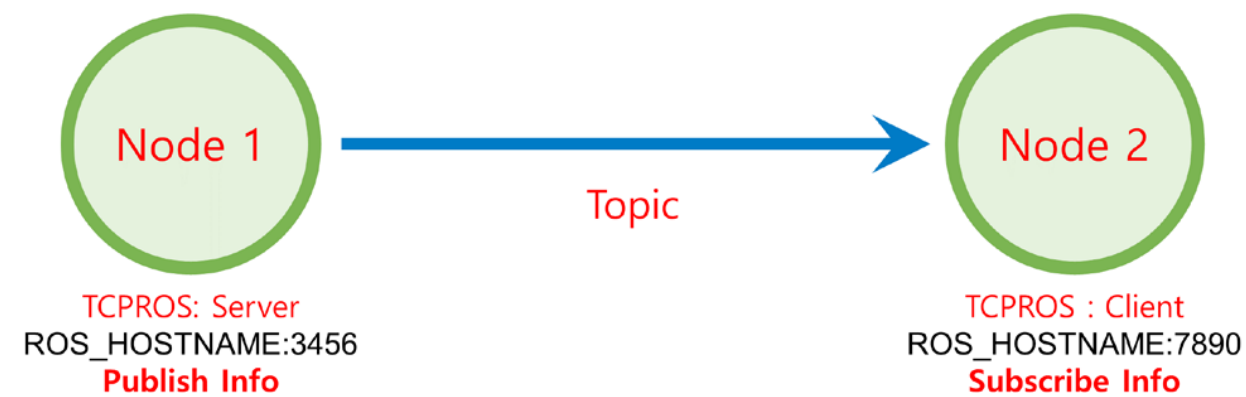
TCPROS Connection

The subscriber node creates a client for the publisher node using TCPROS, and connects to the publisher node. At this point, the communication between nodes uses TCP/IP based protocol called TCPROS.



Reference Book: **ROS Robot Programming** (in English).
Authors: Yoonseok Pyo, Hancheol Cho, Leon Jung, Darby Lim

8: Message Transmission



Reference Book: **ROS Robot Programming** (in English).
Authors: Yoonseok Pyo, Hancheol Cho, Leon Jung, Darby Lim