

# Add Custom Message

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## Contents

<b>1</b>	<b>Prepare the package</b>	<b>1</b>
<b>2</b>	<b>Use the new message</b>	<b>2</b>

## 1 Prepare the package

Idea: create a new package for defining the new messages

- Create a new package. `catkin_create_pkg custom_msg std_msgs`
- `roscd custom_msgs`
- `mkdir msg`
- `echo "uint16[] data" > msg/Customized_Data.msg`
- In `custom_msg/package.xml` you should write

```
<build_depend>message_generation</build_depend>
<exec_depend>message_runtime</exec_depend>
```

- In `custom_msg/CMakeLists.txt` you should write

```
find_package(catkin REQUIRED COMPONENTS std_msgs message_generation)
...
#CATKIN_DEPENDS - Other catkin projects that this project depends on
#message_runtime dependency in order to tell Catkin and Cmake that your
#projects contains custom types and it needs to compile all headers
#and files for you to be able to include those in your code.
```

```

catkin_package(CATKIN_DEPENDS message_runtime)
...
add_message_files(FILES msg/Customized_Data.msg)
...
#you use std_msg in messages/services from other packages at compile:
generate_messages(DEPENDENCIES std_msgs)

```

- Rebuild with a `catkin_make`.
- In order to use the new message

## 2 Use the new message

- Add in the `myPackage/CMakeLists.txt` the following line

```

find_package(catkin REQUIRED COMPONENTS ... custom_msgs)

include_directories(include ${catkin_INCLUDE_DIRS})

add_dependencies(talker custom_msgs_generate_messages_cpp)

```

- Add in the `myPackage/package.xml` the following lines:

```

<build_depend>custom_msgs</build_depend>
<exec_depend>custom_msgs</exec_depend>

```

- In the `talker.cpp` file

```

include <custom_msg/Customized_Data>

ros::Publisher custom_chatter_pub =
    n.advertise<custom_msgs::First_Compound_Data>("custom_chatter", 1000);
custom_msgs::First_Compound_Data fcd;
fcd.name.data = "Mario";
fcd.num.data = count;
ROS_INFO("%s al numero %d", fcd.name.data.c_str(), fcd.num.data);
custom_chatter_pub.publish(fcd);

```