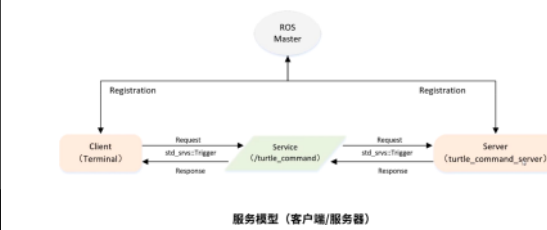
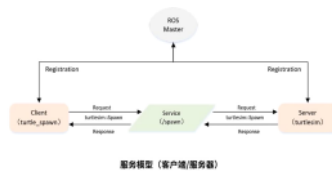
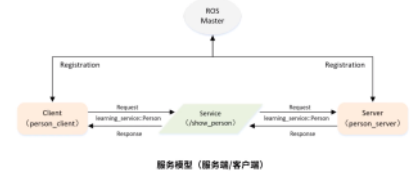


自定义服务数据 client&Server

2022年11月19日 星期六 22:42



自定义服务数据



创功能见,

```
$ cd ~/catkin_ws/src
$ catkin_create_pkg learning_service roscpp rospy std_msgs geometry_msgs turtlesim
```



写好 CPP



写好 CPP



配置CMake List

配置服务器代码编译规则

```
## Declare a C++ executable
## With catkin, all packages are built within a single CMake context
## The recommended prefix ensures that target names across packages don't collide
add_executable(turtle_spawn src/turtle_spawn.cpp)
target_link_libraries(turtle_spawn ${catkin_LIBRARIES})
```

如何配置CMakeLists.txt中的编译规则

- 设置需要编译的代码和生成的可执行文件;
- 设置链接库;

```
add_executable(turtle_command_server src/turtle_command_server.cpp)
target_link_libraries(turtle_command_server ${catkin_LIBRARIES})
```

CMakeLists.txt

配置CMake List

如何配置CMakeLists.txt中的编译规则

- 设置需要编译的代码和生成的可执行文件;
- 设置链接库;

```
add_executable(turtle_spawn src/turtle_spawn.cpp)
target_link_libraries(turtle_spawn ${catkin_LIBRARIES})
```

CMakeLists.txt

验收

```
$ cd ~/catkin_ws
$ catkin_make
$ source devel/setup.bash
$ roscore
$ roslaunch turtlesim turtlesim_node
$ roslaunch learning_service turtles_spawn
```



编译运行

编译并运行服务器

```
$ cd ~/catkin_ws
$ catkin_make
$ source devel/setup.bash
$ roscore
$ roslaunch turtlesim turtlesim_node
$ roslaunch learning_service turtles_spawn
$ rosservice call /turtle_command "[]"
```

```
roslaunch learning_service turtles_spawn
[INFO] [1671551111.123456]: turtlesim_node: ready to receive turtle command
[INFO] [1671551111.123456]: turtlesim_node: ready to receive turtle command
[INFO] [1671551111.123456]: turtlesim_node: ready to receive turtle command
[INFO] [1671551111.123456]: turtlesim_node: ready to receive turtle command
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[INFO] [1671551111.123456]: turtlesim_node: ready to receive turtle command
[INFO] [1671551111.123456]: turtlesim_node: ready to receive turtle command
```

运行server; server将持续等待client发生请求

自定义服务数据

如何自定义服务数据

```
string name
uint8 age
uint8 sex

uint8 unknown = 0
uint8 male = 1
uint8 female = 2

string result

Person.srv
```

定义srv文件:

- 在package.xml中添加功能包依赖
 - > build_depend= message_generation / build_depend= message_runtime / exec_depend=
- 在CMakeLists.txt添加编译选项
 - > find_package(... message_generation)
 - > add_service_files(FILES Person.srv)
 - > generate_messages(DEPENDENCIES std_msgs)
 - > catkin_package(... message_runtime)
- 编译生成语言相关文件

1. 写个 srv 文件丢入新建的srv file 中
2. 于xml中添加依赖
3. 于CMakeList中...

编译并运行发布者和订阅者

```
$ cd ~/catkin_ws
$ catkin_make
$ source devel/setup.bash
$ roscore
$ roslaunch learning_service person_server
$ roslaunch learning_service person_client
```

