

# actionlib

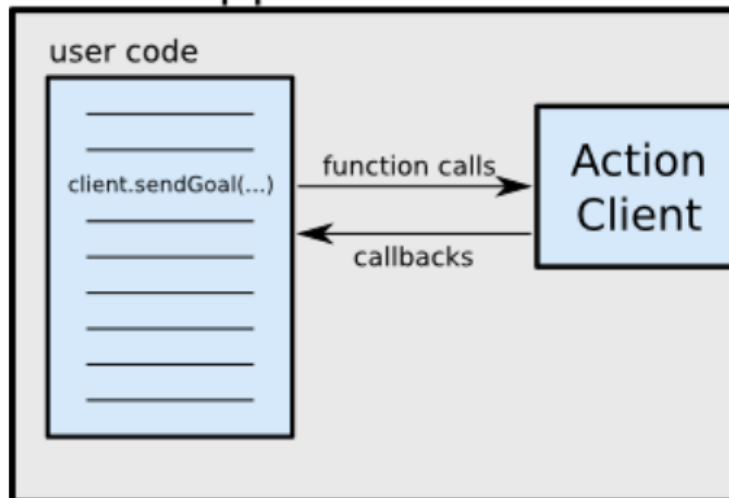
actionlib 提供了一套应对优先级任务的标准接口，集合了 topic 和 service 两种通信方式的优点来解决一些时间较长，同时又需要不间断状态返回的任务。它提供了取消任务、定时反馈状态、优先级抢占等方便有效的功能。类似于 service，也分为服务器端和客户端两部分。

.action File

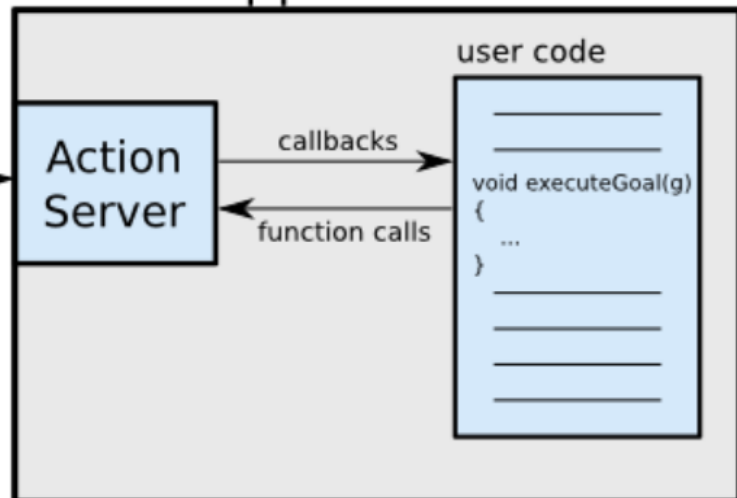
```
#goal
uint32 dishwasher_id
---
#result
uint32 total_dishes_cleaned
---
#feedback message
float32 percent_complete
```

- DoDishesAction.msg
- DoDishesActionGoal.msg
- DoDishesActionResult.msg
- DoDishesActionFeedback.msg
- DoDishesGoal.msg
- DoDishesResult.msg
- DoDishesFeedback.msg

## Client Application



## Server Application



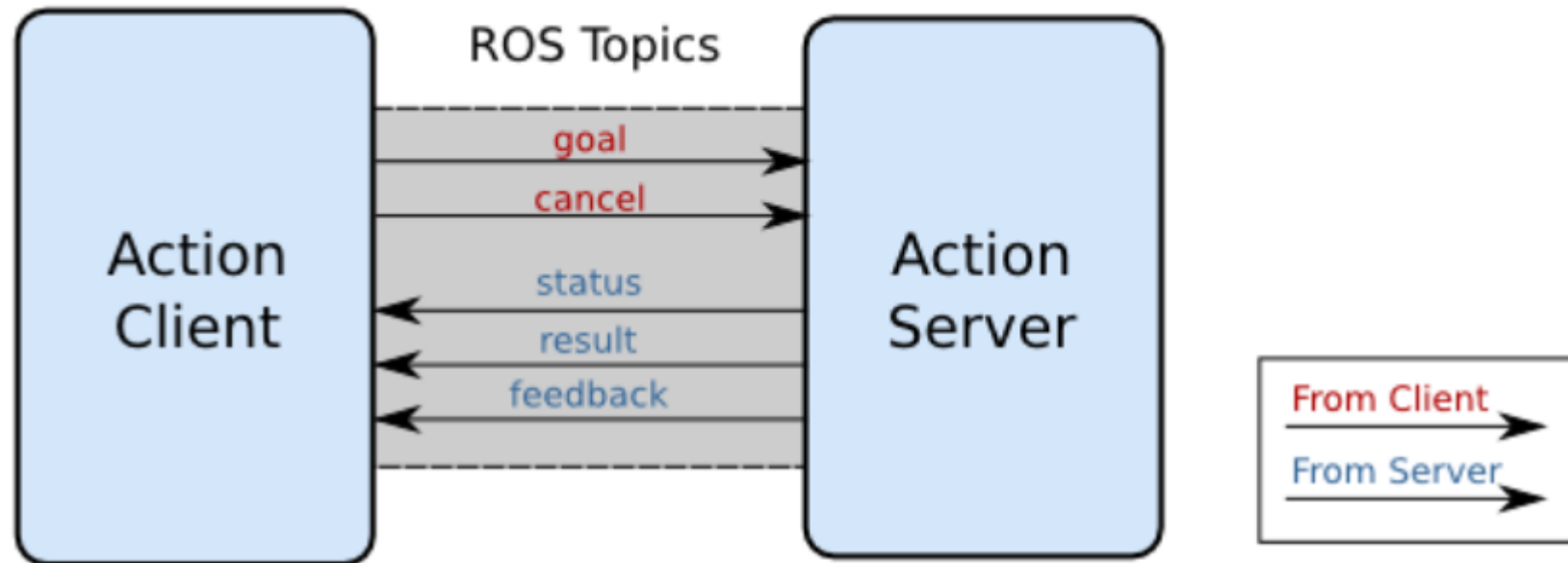
ROS

# SimpleActionServer Goal Policies

- 同一时间只有一个 goal 有效
- 已经在执行的 goal 会被新来的终止并替代
- An explicit preempt goal preempts all goals with timestamps that are less than or equal to the stamp associated with the preempt
- Accepting a new goal implies successful preemption of any old goal and the status of the old goal will be changed automatically to reflect this

# Action Interface & Transport Layer

## Action Interface



## ROS Messages

- **goal** - Used to send new goals to servers
- **cancel** - Used to send cancel requests to servers
- **status** - Used to notify clients on the current state of every goal in the system.
- **feedback** - Used to send clients periodic auxiliary information for a goal.
- **result** - Used to send clients one-time auxiliary information upon completion of a goal