

ROSパッケージ作成

ROSパッケージとは、ROSでプログラムを作成するための基本単位で、少なくとも1つ以上のノードを含む。

構成

- PC Let's note CF-S10
- OS Debian9
- ROS melodic

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1. パッケージ

ROSでプログラムを作成し始めるとき、まずはパッケージを作る必要がある。

1.1 パッケージの作成

```
$ cd ~/catkin_ws/src
```

```
$ catkin_create_pkg kansetu_syokichi rospy roscpp std_msgs
```

<出力>

```
Created file kansetu_syokichi/package.xml
```

```
Created file kansetu_syokichi/CMakeLists.txt
```

```
Created folder kansetu_syokichi/include/kansetu_syokichi
```

```
Created folder kansetu_syokichi/src
```

```
Successfully created files in
```

```
/home/yo/catkin_ws/src/kansetu_syokichi. Please adjust the values  
in package.xml.
```

```
$ cd ~/catkin_ws
```

```
$ catkin_make
```

<出力>

Base path: /home/yo/catkin_ws

Source space: /home/yo/catkin_ws/src

Build space: /home/yo/catkin_ws/build

Devel space: /home/yo/catkin_ws/devel

Install space: /home/yo/catkin_ws/install

####

Running command: "cmake /home/yo/catkin_ws/src

-DCATKIN_DEVEL_PREFIX=/home/yo/catkin_ws/devel

-DCMAKE_INSTALL_PREFIX=/home/yo/catkin_ws/install -G Unix

Makefiles" in "/home/yo/catkin_ws/build"

####

-- Using CATKIN_DEVEL_PREFIX: /home/yo/catkin_ws/devel

-- Using CMAKE_PREFIX_PATH:

/home/yo/catkin_ws/devel;/opt/ros/melodic

-- This workspace overlays:

/home/yo/catkin_ws/devel;/opt/ros/melodic

-- Found PythonInterp: /usr/bin/python2 (found suitable version
"2.7.13", minimum required is "2")

-- Using PYTHON_EXECUTABLE: /usr/bin/python2

-- Using Debian Python package layout

-- Using emp: /usr/bin/emp

-- Using CATKIN_ENABLE_TESTING: ON

-- Call enable_testing()

-- Using CATKIN_TEST_RESULTS_DIR:

/home/yo/catkin_ws/build/test_results

-- Found gtest sources under '/usr/src/googletest': gtests will be built

-- Found gmock sources under '/usr/src/googletest': gmock will be
built

-- Found PythonInterp: /usr/bin/python2 (found version "2.7.13")

-- Using Python nosetests: /usr/bin/nosetests-2.7

-- catkin 0.7.29

-- BUILD_SHARED_LIBS is on

-- BUILD_SHARED_LIBS is on

-- ~~~~~

-- ~~ traversing 1 packages in topological order:

-- ~~ - kansetu_syokichi

-- ~~~~~

```
-- +++ processing catkin package: 'kansetu_syokichi'
-- ==> add_subdirectory(kansetu_syokichi)
-- Configuring done
-- Generating done
-- Build files have been written to: /home/yo/catkin_ws/build
####
##### Running command: "make -j4 -l4" in
"/home/yo/catkin_ws/build"
#####

$ source ~/catkin_ws/devel/setup.bash
```

1.2 確認方法

```
$ roscd kansetu_syokichi
移動できればOK
```

1.3 パッケージの削除

```
$ cd ~/catkin_ws
$ rm -rf src/kansetu_syokichi
$ rm -rf build devel
$ catkin_make
<出力>
Base path: /home/yo/catkin_ws
Source space: /home/yo/catkin_ws/src
Build space: /home/yo/catkin_ws/build
Devel space: /home/yo/catkin_ws/devel
Install space: /home/yo/catkin_ws/install
####
##### Running command: "cmake /home/yo/catkin_ws/src
-DCATKIN_DEVEL_PREFIX=/home/yo/catkin_ws/devel
-DCMAKE_INSTALL_PREFIX=/home/yo/catkin_ws/install -G Unix
Makefiles" in "/home/yo/catkin_ws/build"
#####
-- The C compiler identification is GNU 6.3.0
-- The CXX compiler identification is GNU 6.3.0
-- Check for working C compiler: /usr/bin/cc
-- Check for working C compiler: /usr/bin/cc -- works
```

```
-- Detecting C compiler ABI info
-- Detecting C compiler ABI info - done
-- Detecting C compile features
-- Detecting C compile features - done
-- Check for working CXX compiler: /usr/bin/c++
-- Check for working CXX compiler: /usr/bin/c++ -- works
-- Detecting CXX compiler ABI info
-- Detecting CXX compiler ABI info - done
-- Detecting CXX compile features
-- Detecting CXX compile features - done
-- Using CATKIN_DEVEL_PREFIX: /home/yo/catkin_ws/devel
-- Using CMAKE_PREFIX_PATH:
/home/yo/catkin_ws/devel;/opt/ros/melodic
-- This workspace overlays:
/home/yo/catkin_ws/devel;/opt/ros/melodic
-- Found PythonInterp: /usr/bin/python2 (found suitable version
"2.7.13", minimum required is "2")
-- Using PYTHON_EXECUTABLE: /usr/bin/python2
-- Using Debian Python package layout
-- Using empy: /usr/bin/empy
-- Using CATKIN_ENABLE_TESTING: ON
-- Call enable_testing()
-- Using CATKIN_TEST_RESULTS_DIR:
/home/yo/catkin_ws/build/test_results
-- Found gtest sources under '/usr/src/gtest': gtests will be built
-- Found gmock sources under '/usr/src/gtest': gmock will be
built
-- Found PythonInterp: /usr/bin/python2 (found version "2.7.13")
-- Looking for pthread.h
-- Looking for pthread.h - found
-- Looking for pthread_create
-- Looking for pthread_create - not found
-- Looking for pthread_create in pthreads
-- Looking for pthread_create in pthreads - not found
-- Looking for pthread_create in pthread
-- Looking for pthread_create in pthread - found
-- Found Threads: TRUE
-- Using Python nosetests: /usr/bin/nosetests-2.7
```

```
-- catkin 0.7.29
-- BUILD_SHARED_LIBS is on
-- BUILD_SHARED_LIBS is on
-- Configuring done
-- Generating done
-- Build files have been written to: /home/yo/catkin_ws/build
####
#### Running command: "make -j4 -l4" in
"/home/yo/catkin_ws/build"
####
以上
```

参考図書・URL

[1] [ROSのパッケージ作成\(Hello World!\)](#)

アクセス日20210414