

## 인터페이스 패키지 만들기

### Package

```
$ cd ~/Workspaces/ros2_ws/src
$ ros2 pkg create interface_pkg --build-type
ament_cmake
$ cd interface_pkg
$ mkdir msg srv action
```

## 메시지 인터페이스

### Rect.msg

```
src/interface_pkg/msg/Rect.msg
```

```
int64 width
int64 height
```

## 서비스 인터페이스

### OddEvenCheck.srv

```
src/interface_pkg/srv/OddEvenCheck.srv
```

```
# Request
int64 number
---
# Response
string decision
```

## 패키지 설정 파일

### package.xml

```
src/interface_pkg/package.xml
```

```
<?xml version='1.0'?>
<?xml-model
href='http://download.ros.org/schema/package_format3.
xsd'
schematypens='http://www.w3.org/2001/XMLSchema'?>
<package format='3'>
  <name>interface_pkg</name>
  <version>0.1.0</version>
  <description>
    ROS 2 interface package
  </description>
  <maintainer
email='sohicode@gmail.com'>sohi</maintainer>
  <license>Apache 2.0</license>
  <author email='sohicode@gmail.com'>sohi</author>

  <buildtool_depend>ament_cmake</buildtool_depend>
  <buildtool_depend>rosidl_default_generators
</buildtool_depend>
  <exec_depend>rosidl_default_runtime</exec_depend>
  <member_of_group>rosidl_interface_packages
</member_of_group>

  <test_depend>ament_lint_auto</test_depend>
  <test_depend>ament_lint_common</test_depend>

  <export>
    <build_type>ament_cmake</build_type>
  </export>
</package>
```

## 빌드 설정 파일

### CMakeLists.txt

```
src/interface_pkg/CMakeLists.txt
```

```
cmake_minimum_required(VERSION 3.5)
project(interface_pkg)
# Default to C99
if(NOT CMAKE_C_STANDARD)
  set(CMAKE_C_STANDARD 99)
endif()
# Default to C++14
if(NOT CMAKE_CXX_STANDARD)
  set(CMAKE_CXX_STANDARD 14)
endif()

if(CMAKE_COMPILER_IS_GNUCXX OR CMAKE_CXX_COMPILER_ID MATCHES
"Clang")
  add_compile_options(-Wall -Wextra -Wpedantic)
endif()

# find dependencies
find_package(ament_cmake REQUIRED)
# uncomment the following section in order to fill in
# further dependencies manually.
# find_package(<dependency> REQUIRED)

find_package(rosidl_default_generators REQUIRED)

rosidl_generate_interfaces(${PROJECT_NAME}
  "msg/Rect.msg"
  "srv/OddEvenCheck.srv"
)

if(BUILD_TESTING)
  find_package(ament_lint_auto REQUIRED)
  # the following line skips the linter which checks for
  copyrights
  # uncomment the line when a copyright and license is not
  present in all source files
  #set(ament_cmake_copyright_FOUND TRUE)
  # the following line skips cpplint (only works in a git
  repo)
  # uncomment the line when this package is not in a git
  repo
  #set(ament_cmake_cpplint_FOUND TRUE)
  ament_lint_auto_find_test_dependencies()
endif()

ament_export_dependencies(rosidl_default_runtime)
ament_package()
```

## 빌드

### build

```
$ cd ~/Workspaces/ros2_ws
$ colcon build
$ source ./install/setup.bash
```

## 사용 가능 인터페이스 확인

### interface CLI

```
$ ros2 interface package interface_pkg
```

## 인터페이스 확인

```
$ ros2 interface show interface_pkg/msg/Rect
$ ros2 interface show
interface_pkg/srv/OddEvenCheck
```