

설명서

20201780 곽창민

20211729 김찬형

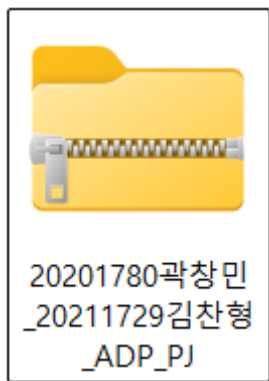
❖ 각 터미널에 환경 설정

[Terminal 1]

- `misys@misys-laptop:~$ cd forza_ws/race_stack/`
- `misys@misys-laptop:~/forza_ws/race_stack$ source /opt/ros/humble/setup.bash
&& source install/setup.bash`
- `misys@misys-laptop:~/forza_ws/race_stack$./activate_forza.sh`

[Terminal 2, 3, 4, 5, 6]

- `misys@misys-laptop:~/forza_ws/race_stack$ source /opt/ros/humble/setup.bash
&& source install/setup.bash`
- `misys@misys-laptop:~/forza_ws/race_stack$./activate_forza.sh`



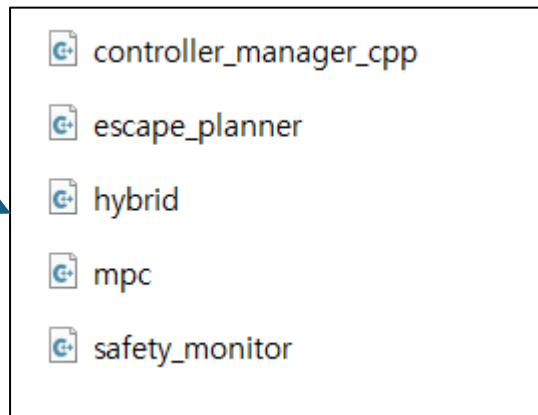
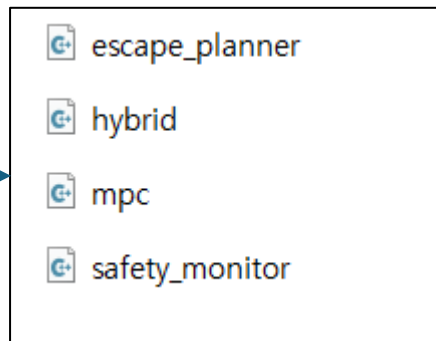
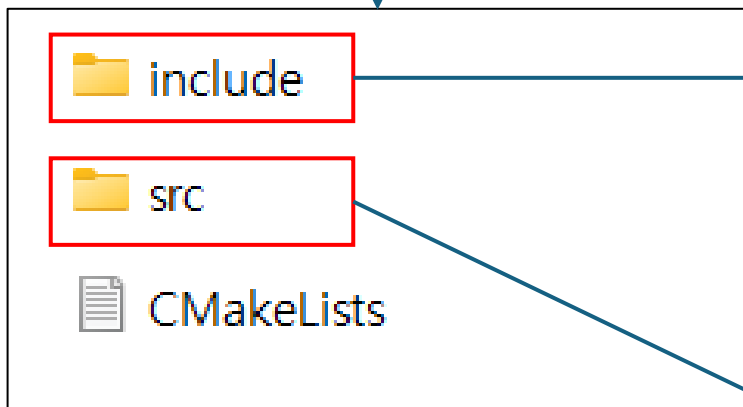
압축해제

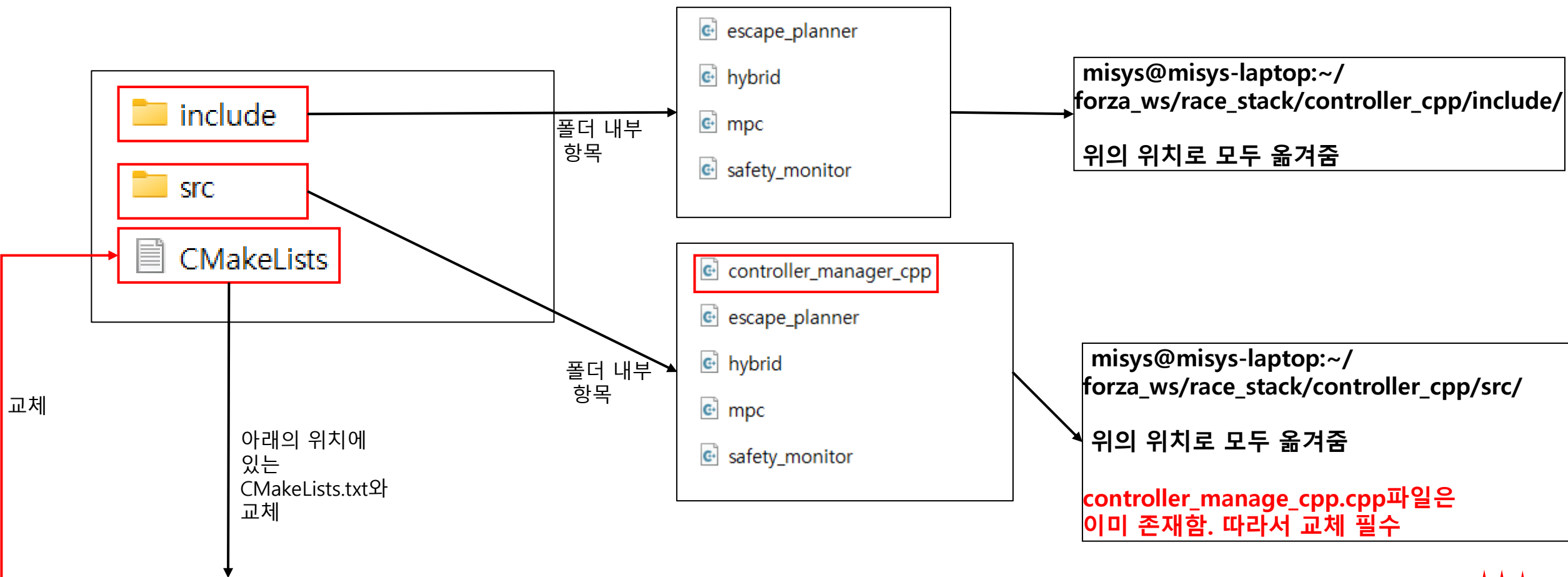


왼쪽 ADP_PJ파일을
MISYS:FORZA_FULL docker환경으로 옮겨줍니다.

ADP_PJ

내부 파일
내부 폴더





misys@misys-laptop:~/forza_ws/race_stack/controller_cpp/

```
misys@chan-System-Product-Name:~/forza_ws/race_stack/controller_cpp$ ls  
CMakeLists.txt  cfg  include  launch  package.xml  src
```

**ADP폴더 내부의 include, src폴더
통째로 도커 내부의 include, src폴더와
교체하는것이 아닌
폴더 내부의 파일들만 도커에 추가 및 교체
(controller_manager_cpp.cpp는 교체)**

❖ 각 터미널에 환경 설정

[Terminal 1] 새로 바뀐 controller cpp파일 빌딩 작업

```
misys@misys-laptop:~/forza_ws/race_stack$ colcon build --packages-select controller_cpp  
misys@misys-laptop:~/forza_ws/race_stack$ source install/setup.bash
```

[Terminal 2, 3, 4, 5, 6]

- misys@misys-laptop:~/forza_ws/race_stack\$ source install/setup.bash

❖ [Terminal 1] 시뮬레이션 및 자차 측위 (particle filter + EKF) 실행

```
misys@misys-laptop:~/forza_ws/race_stack$ ros2 launch stack_master base_system_launch.xml  
racecar_version:=OrinNano map_dir:=small_hall map_name:=small_hall_orig sim:=true
```

❖ [Terminal 2] rqt

* rqt에서 추월 가능 섹터 지정

❖ [Terminal 3] 자차 제어 (Pure pursuit / HYBRID / MPC) 실행

```
misys@misys-laptop:~/forza_ws/race_stack$ ros2 launch stack_master head_to_head_launch.xml  
racecar_version:=OrinNano ctrl_algo:=PP
```

오른쪽 두개 문구로 바꿔서 실행가능

HYBRID

MPC

❖ [Terminal 4] 상대차 제어 (Pure pursuit) 실행

```
misys@misys-laptop:~/forza_ws/race_stack$ ros2 launch opponent_publisher_cpp  
opponent_publisher_launch.xml speed:=0.5
```

❖ [Terminal 5] Safety monitor 실행

```
misys@misys-laptop:~/forza_ws/race_stack$ ros2 run controller_cpp safety_monitor
```

❖ [Terminal 6] Escape monitor 실행

```
misys@misys-laptop:~/forza_ws/race_stack$ ros2 run controller_cpp escape_planner
```