

Open-RMF - Exercise : patrol tasks

1. Simulate the office world

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```
rocker --nvidia --x11 \  
ghcr.io/open-rmf/rmf/rmf_demos:latest \  
ros2 launch rmf_demos_gz \  
office.launch.xml
```

2. Dispatch two patrol tasks simultaneously

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```
// Para el primer robot  
docker run --rm -it \  
ghcr.io/open-rmf/rmf/rmf_demos:latest \  
ros2 run rmf_demos_tasks dispatch_patrol \  
-p patrol_A2 patrol_D2 patrol_A1 \  
-n 3 \  
--use_sim_time
```

Outputs :

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```
[INFO] [1737654228.094645846] [task_requester]: Using Sim Time  
[INFO] [1737654228.098052781] [task_requester]: Using  
'dispatch_task_request'  
Json msg payload:  
{  
  "type": "dispatch_task_request",  
  "request": {  
    "unix_millis_request_time": 0,  
    "unix_millis_earliest_start_time": 0,  
    "requester": "rmf_demos_tasks",  
    "category": "patrol",  
    "description": {  
      "places": [  
        "patrol_A2",  
        "patrol_D2",
```

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        "patrol_A1"
    ],
    "rounds": 3
}
}
}
Got response:
{'state': {'booking': {'id': 'patrol.dispatch-b33e7398a4', 'requester':
'rmf_demos_tasks', 'unix_millis_earliest_start_time': 0,
'unix_millis_request_time': 0}, 'category': 'patrol', 'detail': {'places':
['patrol_A2', 'patrol_D2', 'patrol_A1'], 'rounds': 3}, 'dispatch':
{'errors': [], 'status': 'queued'}, 'status': 'queued',
'unix_millis_start_time': 0}, 'success': True}

```

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// Para el segundo robot
docker run --rm -it \
    ghcr.io/open-rmf/rmf/rmf_demos:latest \
    ros2 run rmf_demos_tasks dispatch_patrol \
        -p patrol_A1 presupplies patrol_A1\
        -n 3 \
        --use_sim_time

```

Outputs :

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[INFO] [1737654234.652608281] [task_requester]: Using Sim Time
[INFO] [1737654234.656444893] [task_requester]: Using
'dispatch_task_request'
Json msg payload:
{
  "type": "dispatch_task_request",
  "request": {
    "unix_millis_request_time": 0,
    "unix_millis_earliest_start_time": 0,
    "requester": "rmf_demos_tasks",
    "category": "patrol",
    "description": {
      "places": [
        "patrol_A1",
        "presupplies",
        "patrol_A1"
      ],

```

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        "rounds": 3
    }
}
}
Got response:
{'state': {'booking': {'id': 'patrol.dispatch-cd9cd672f0', 'requester':
'rmf_demos_tasks', 'unix_millis_earliest_start_time': 0,
'unix_millis_request_time': 0}, 'category': 'patrol', 'detail': {'places':
['patrol_A1', 'presupplies', 'patrol_A1'], 'rounds': 3}, 'dispatch':
{'errors': [], 'status': 'queued'}, 'status': 'queued',
'unix_millis_start_time': 0}, 'success': True}

```

3. Record a bag of ROS topics from RViz

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docker run --rm -it \
  -v `pwd`/rosbags:/rosbags \
  ghcr.io/open-rmf/rmf/rmf_demos:latest \
    ros2 bag record -o /rosbags/office \
      /clock /fleet_markers /schedule_markers \
      /map_markers /building_systems_markers \
      /floorplan

```

Outputs :

```

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[INFO] [1737654239.873379639] [rosbag2_recorder]: Press SPACE for
pausing/resuming
[INFO] [1737654239.884821553] [rosbag2_recorder]: Listening for topics...
[INFO] [1737654239.884851151] [rosbag2_recorder]: Event publisher thread:
Starting
[INFO] [1737654239.904871785] [rosbag2_recorder]: Subscribed to topic
'/schedule_markers'
[INFO] [1737654239.906360075] [rosbag2_recorder]: Subscribed to topic
'/map_markers'
[WARN] [1737654239.907873243] [rosbag2_storage]: Some, but not all,
publishers on topic "/fleet_markers" are offering
RMW_QOS_POLICY_DURABILITY_TRANSIENT_LOCAL. Falling back to
RMW_QOS_POLICY_DURABILITY_VOLATILE as it will connect to all publishers.
Previously-published latched messages will not be retrieved.

```

```
[INFO] [1737654239.909712290] [rosbag2_recorder]: Subscribed to topic
'/fleet_markers'
[INFO] [1737654239.913040742] [rosbag2_recorder]: Subscribed to topic
'/clock'
[INFO] [1737654239.913592732] [rosbag2_recorder]: Recording...
[INFO] [1737654240.942288336] [rosbag2_recorder]: Subscribed to topic
'/building_systems_markers'
[INFO] [1737654240.946713837] [rosbag2_recorder]: Subscribed to topic
'/floorplan'
[INFO] [1737654240.946753205] [rosbag2_recorder]: All requested topics are
subscribed. Stopping discovery...
[INFO] [1737654548.264017862] [rosbag2_recorder]: Pausing recording.
[INFO] [1737654548.264149354] [rosbag2_cpp]: Writing remaining messages from
cache to the bag. It may take a while
[INFO] [1737654548.268553629] [rosbag2_recorder]: Event publisher thread:
Exiting
[INFO] [1737654548.268833081] [rosbag2_recorder]: Recording stopped
[INFO] [1737654548.387940641] [rclcpp]: signal_handler(signum=2)
```