

# Learn (System Demo)

Requirement ID

UAV-302: sUAS Mission Coordination in Windy Weather

1. Select Requirement Id you would like to test

Title: sUAS Mission Coordination in Windy Weather

2. Requirement Details

Description: Two sUAS (Small Unmanned Aircraft Systems) shall be able to complete their missions in windy weather conditions while maintaining a minimum separation distance of at least 5 meters between each other and without drifting by more than 5 meters.

START SCENARIO CONFIGURATION

## Requirement



Two sUAS (Small Unmanned Aircraft Systems) shall be able to complete their missions in windy weather conditions while maintaining a minimum separation distance of at least 5 meters between each other and without drifting by more than 5 meters.

1 Environment Configuration 2 Mission Configuration 3 Test Configuration

1. Wind Configuration

Wind Direction: NE

Wind Velocity (m/s): 1

Enable Fuzzy Test

4. Automatically configure wind direction and velocity

2. Region where you would like to instantiate UAVs

Region: Chicago O'Hare Airport

Latitude: 41.980381

Longitude: -87.934524

Altitude: 200

3. Choose Time of day - This setting impacts the lighting condition in the simulated environment

Time of Day: 10:00:00

Enter Time of Day (24 Hour Format)

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NEXT

## Requirement



Two sUAS (Small Unmanned Aircraft Systems) shall be able to complete their missions in windy weather conditions while maintaining a minimum separation distance of at least 5 meters between each other and without drifting by more than 5 meters.

✓ Environment Configuration → 2 Mission Configuration → 3 Test Configuration

Please make sure that no two sUAS (small unmanned aircraft system) have the same Home Geolocation

Number of sUAS 1 +

4. Add a new drone in the simulation

Drone 1

Name Drone 1 1. Name/Id of Drone/sUAS

Mission Square

Home Location Latitude 41.980381 Longitude -87.934524 Height 200

2. Configure Home location of this sUAS in the environment

3. Configure Basic Sensor settings of each drone

Camera Barometer Magnetometer GPS

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## Requirement



Two sUAS (Small Unmanned Aircraft Systems) shall be able to complete their missions in windy weather conditions while maintaining a minimum separation distance of at least 5 meters between each other and without drifting by more than 5 meters.

✓ Environment Configuration → ✓ Mission Configuration → 3 Test Configuration

TEST PROPERTIES

COLLISION

LANDING

Test Properties

DRIPT

AIRSPACE

SEPARATION

Description: Test whether the drones drift from its planned flight path

Status ☒ Enabled 1. Enable if you would like the system to monitor the safety property and report violations

Configure the acceptable flight drift

Deviation/Drift (in meters) 15 2. Configure the required params of this property

Note: Flight drift is calculated by analyzing whether the sUAS or drone drifts away from the planned path and breaches the configured distance at any point in the mission

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