

1.3 Identifying test approach for chosen attributes

System-level testing:

Objective: Ensure the service functions correctly as a whole and meets performance requirements

Approach:

- End to End testing: Check the REST service returns valid JSON and handles errors gracefully
- Performance testing: Ensure all tasks complete within 30 seconds

Integration-level testing:

Objective: Ensure components and external services interact correctly

Approach:

- Test correct retrieval of data from external ILP REST service
- Test drone movement requirements (angles, move size, no-fly zones, return to where it starts) integrate with drone selection (validate order against drone capabilities) to produce valid path with a valid drone

Unit-level testing:

Objective: Confirm individual components work in isolation

Approach:

- Test paths do no intersect no-fly zones
- Test drones move in one of the 16 valid directions
- Test each drone movement step is 0.00015 degrees