

Instructor Tools

6 articles · Complete website edition

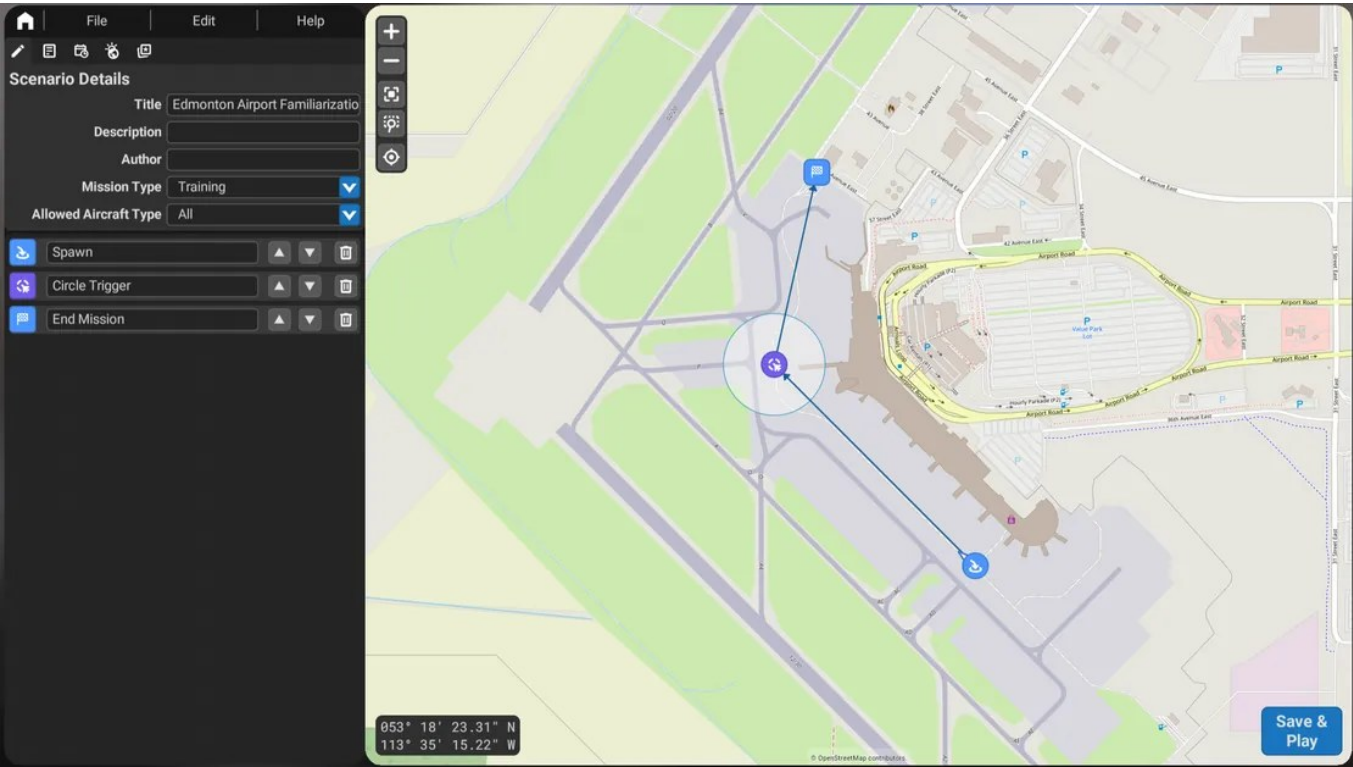
Includes all article text, tables and available illustrations. Videos and interactive resources are linked. Printed page numbers restart with each article. Use the clickable contents or PDF bookmarks to navigate.

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Instructor tools

The mission module is AVOPSIM's training layer: scored missions built on your routes and procedures, the **Mission Editor** for instructors to author new scenarios on the airport map, and the **Examiner Console** to launch, monitor and assess several stations at once.



The Mission Editor with the airport map.

At a glance

Tool	Purpose
Missions	Scored scenarios on your digital twin, delivered in blocks of 20 and extended by your instructors.
Mission Editor	Author new scenarios on the airport map without programming.
Examiner Console	Web application to launch missions, monitor several trainees at once and assess competency remotely.
Debrief and replay	Review a run with the trainee and repeat the exact situation.

One instructor, several stations

In-vehicle training needs one instructor per trainee in the passenger seat. With AVOPSIM, one instructor monitors several stations from the Examiner Console, and missions pass or fail automatically against the constraints you configure. The instructor's time goes into coaching and debriefing rather than supervision.

Instructor training

Instructors are trained on the Mission Editor and Examiner Console as part of every AVOPSIM delivery. See [Deployment process](#).

Missions and scoring

A mission is a scored training scenario on your digital twin: a route or task, the vehicle, aircraft and vehicle traffic, time of day, weather and season, and the pass and fail constraints that decide the result.

Mission library

- Missions are delivered in **blocks of 20 scenarios**, built on your routes, hold points and constraints during **mission integration**.
- Your instructors extend the library with the **Mission Editor** after delivery.
- The same missions run on every station tier.

What a mission contains

Element	Examples
Route or task	A service road route with taxiway crossings, a stand approach, a runway clearing pattern, a response to an incident aircraft
Vehicle	Operations pickup, ARFF unit, plow and broom, belt loader, deicing truck, boarding bridge
Traffic	Moving aircraft (pushbacks, arrivals and departures) and vehicle traffic
Triggers and conflicts	Events placed on the map that start traffic or create a conflict the trainee must recognize
Conditions	Time of day, season, precipitation, visibility and surface contamination
Constraints	The pass and fail rules: route compliance, hold points, speed, clearance, timing

Scoring

Every mission returns a **pass or fail** against the constraints you configure, plus a log of violations and timings. Typical scored items include:

- Route compliance and wrong turns
- Runway incursions and restricted-area entries
- Hold point and hold-short compliance
- Speed and approach speed
- Clearance to aircraft, lights, signs and other vehicles, and any contact
- Response time and final position (ARFF)
- Coverage, sequence and timing (snow removal and deicing)

- Phraseology, readbacks and clearance discipline (AI radio)

Results go to the training record in the [Examiner Console](#).

Difficulty and progression

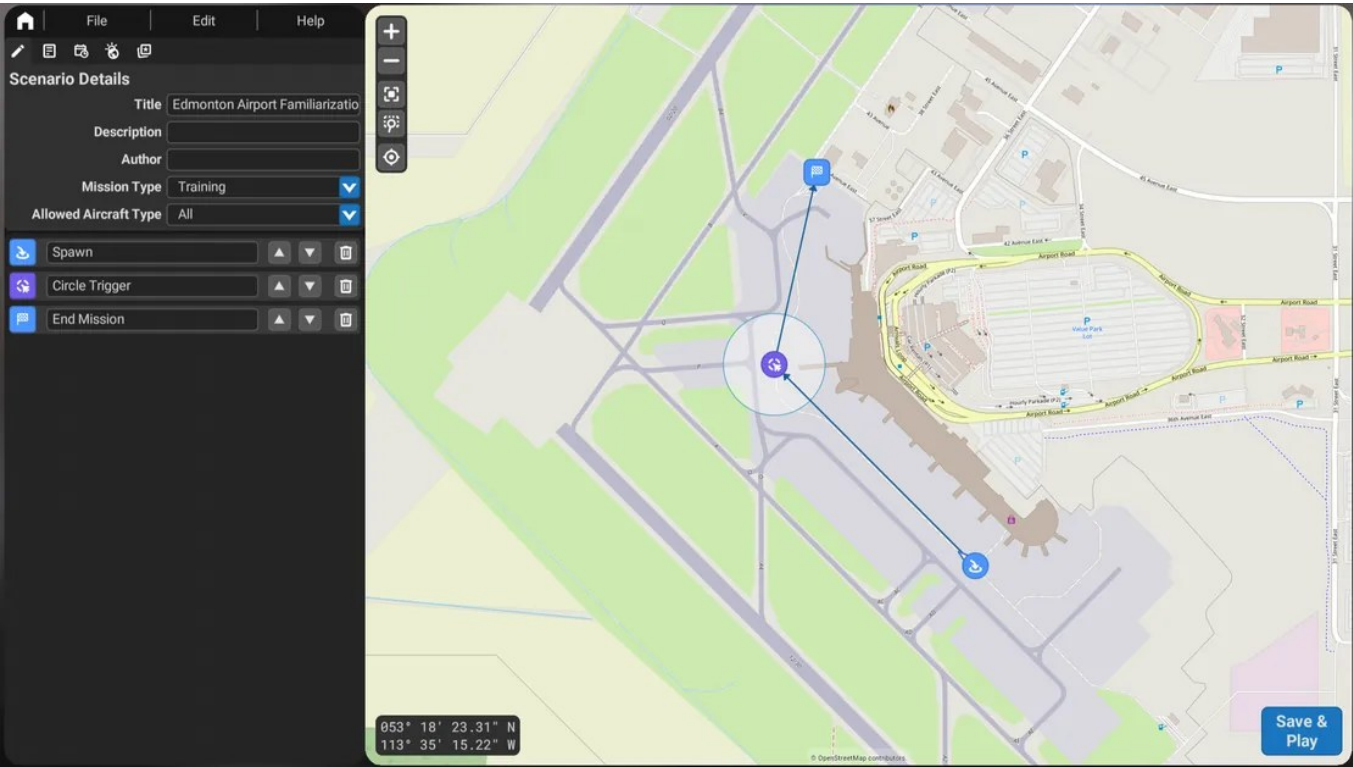
New hires, transfers from other airports and recurrent candidates run the same missions at different difficulty. A typical progression moves from daylight familiarization to traffic, then to night, winter and low-visibility conditions, and finally to scored pre-test assessment before the practical exam.

Mission Editor

Draft content

1 unfinished section in this article. Highlighted reminders show what still needs to be expanded.

The Mission Editor lets instructors author new scenarios on the airport map without programming. Use it to build local scenarios after delivery, to adapt missions when the airfield changes, and to create exercises for specialist programs.



What you can set up

- **Location.** Route, stand, gate, deicing pad, runway or incident location on your digital twin.
- **Vehicle.** Any unit modeled for your fleet.
- **Traffic.** Moving aircraft and vehicle traffic, with triggers that start movements and create conflicts.
- **Conditions.** Time of day, season, precipitation, visibility, wind and surface contamination.
- **Constraints.** The pass and fail rules and the violations that are logged.

Examples by program

Program	What the instructor configures
Airside driver training	Route, traffic, time of day and weather

Program	What the instructor configures
ARFF and rescue	Incident aircraft placement, time, weather and traffic
Ground handling	Stand, aircraft type and turnaround traffic
Boarding bridge	Gate, aircraft type and door, and day, night, rain or wind
Snow removal	Season, precipitation, visibility, surface contamination and traffic
Deicing	Stand or pad, aircraft type, weather and traffic

Training ahead of change

A new taxiway, a relocated stand or a construction closure is added to the digital twin, and instructors build missions on the new layout so drivers learn the new routing before it goes live.

Authoring a mission step by step

Planned content: the Mission Editor workflow with screenshots: creating a mission, placing the start position and route, adding traffic and triggers, setting conditions, defining constraints, testing and publishing to stations.

 **Manual section incomplete**
Expand this section before final publication. Pending: TO ADD

Examiner Console

⚠ Draft content

1 unfinished section in this article. Highlighted reminders show what still needs to be expanded.

The Examiner Console is a web application that lets instructors monitor several trainees at once, manage missions and assess competency remotely.

What the Examiner Console does

- **Assign missions.** Choose the mission for each station, with route, traffic, time of day and weather.
- **Monitor several stations.** One instructor follows several trainees at the same time.
- **Assess automatically.** Missions pass or fail against the configured constraints; violations and timings are logged.
- **Keep records.** Results go to each trainee's training record.
- **Review radio calls.** For the AI radio program, scores and transcripts are available in the console.

A typical session

1. Assign a mission to each station from the Examiner Console.
2. Trainees drive the mission on their station while the instructor monitors progress.
3. Each mission scores automatically. Violations such as incursions, hold point violations, contact or excessive speed are logged.
4. Review results and transcripts with each trainee. See [Debrief and replay](#).

Using the console step by step

Planned content: signing in, adding trainees and stations, launching and stopping missions, reading the live station view, and exporting training records.

⚠ Manual section incomplete

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Running a training session

Every AVOPSIM program follows the same four-step mission flow. The details vary by program; see each program's **Running a mission** article.

1. **Assign.** The instructor selects or builds a mission (location, vehicle, traffic, time of day and weather) and assigns it from the Examiner Console.
2. **Drive.** The trainee drives the mission on the digital twin, following the signage, markings, hold points and procedures of your airport.
3. **Track.** Aircraft and vehicle traffic move through the scenario. Compliance, clearance, speed and timing are tracked throughout.
4. **Score and record.** The mission returns a pass or fail with a log of violations. Results go to the training record for debrief.

Before the session

- Confirm every station is powered on, connected to the internet and signed in.
- Check the controls (wheel, pedals, shifter or controller) and headsets respond.
- Choose missions appropriate to each trainee's level.

During the session

- Monitor all stations from the Examiner Console.
- Note situations to replay during the debrief.

After the session

- Review the results and the violation log with each trainee.
- Replay the situations that went wrong and repeat them until correct.
- Assign self-paced practice on desk stations between instructor-led sessions.

Tip

Night, winter and low-visibility conditions are available on demand. Once a trainee is comfortable with a route in daylight, repeat it in darkness, fog, rain or snow.

Debrief and replay

Mistakes such as runway incursions, missed hold points or wrong phraseology happen in the simulator, are logged and are debriefed.

Scenario replay

Instructors review a run with the trainee and repeat the exact situation. Replaying the same traffic, weather and timing lets the trainee try again until the correct action is automatic.

Objective records

Every mission returns a pass or fail against constraints you configure, plus a log of violations. Because every trainee is scored the same way every time, the records give your training department objective evidence of progress ahead of the practical exam.

Radio transcripts

With the **AI radio communication** program, every call and reply is available as a transcript for debrief, together with scores for phraseology, readback completeness and response time.

Suggested debrief structure

1. Start with the mission result and the violation log.
2. Replay each flagged situation and ask the trainee what they saw.
3. Agree the correct action and repeat the situation.
4. Assign a follow-up mission or self-paced practice.