

Exercise 1 (Using the Toolchain)

1. Start a DUNE simulator for **lauv-noptilus-1** vehicle
2. In Neptus, set **lauv-noptilus-1** as the main vehicle and verify its readiness
3. Create a plan which consists of a rectangular survey with sidescan, using **lauv-noptilus-1**
4. Command plan execution (by the DUNE simulator)
5. Open the log of the execution simulation in Neptus MRA and plot vehicle depth
 - See also: <http://lsts.pt/neptus/manual/trunk/>

Exercise 2 (Extending Neptus)

1. Create a **ConsoleLayer** plug-in that shows the depth of the vehicles
2. Create a **ConsolePanel** plug-in with a single button that commands execution of an (user-configurable) plan.
 - See also: <https://github.com/LSTS/neptus/tree/temporary/workshop>

Exercise 3 (Extending DUNE)

1. Create a **consumer** task that outputs (to the console) the vehicle's bathymetry using the data published in **EstimatedState** messages. You can generated messages of type **Depth**.
2. Create a **publisher** task that outputs Temperature messages periodically. Use a periodicity of 1 second.
3. Create a **consumer** task that displays the data being published by the task in 2.
 - See also: <https://github.com/LSTS/dune/tree/temporary/workshop>