SEABASS (currently only for NEMO V3.4_STABLE)

SEABASS (Sea Box for Assimilation) is a NEMO reference configuration for Data Assimilation. SEABASS is of interest for DA systems developers and suers.
For the DA systems developers, SEABASS has been tested with various DA systems, from different methodological families (both probabilistic and variational method). It gives to DA developers the opportunity to compare the results of their own systems with those previous experiments.
For the users, SEABASS is a simple configuration to take in hand but that exhibits important characteristics of a turbulent oceanic circulation at midlatitudes (well-observed region, especially by altimetry satellites)
For NEMO DA components developers, this version ensures to provide a light validation platform (e.g. non-regressive test).
SEABASS is available as a reference configuration with the NEMO 3.4_STABLE version.

Technical Description

SEABASS is an idealized configuration similar to the GYRE configuration, representing double gyres circulation, at mid-latitudes in the north hemisphere. Its principal characteristics are:
• A non-rotated spheric grid, with a regular grid-spacing (between 24 and 44°N and 60°W and 30°W)
• 11 vertical levels
• Biharmonic viscosity and diffusion
• Salinity is forced to 35.5 PSU
• The only forcing is an analytical stationary zonal wind
By default, the horizontal resolution of SEABASS is 1/4°. But, the horizontal resolution can be easily changed in modifying the jp_cfg variable in the OPA_SRC/par_SEABASS.h90 file, before compilation.
Below, a table summarizes essential parameters for different resolutions of the SEABASS configuration. The jp_cfg variable must be modified in the OPA_SRC/par_SEABASS.h90 source files before compilation, and rn_rdt, rn_aht_0 and rn_aht_0_blp must be modified in the namelist.

Horizontal resolution	jp_cfg	rn_rdt	rn_ahm_0_blp	rn_aht_0
1/4°	4	900	-8.E10	-8E10
1/12°	12	300	-0.89E10	-0.89E10