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Overview of the first year of the NEMO global 1/36° configuration (ORCA36) development

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Mercator Ocean International operates global high-resolution forecasting systems in the framework of the Copernicus Marine Environment Monitoring Service. The current system has a 1/12° resolution. In order to prepare the increase of its resolution, the development of a new global configuration has started in 2019, with a higher resolution (1/36°). This configuration is also expected in the H2020 IMMERSE project as a demonstrator for the HPC improvements developed in NEMO OGCM and in the H2020 ESIWACE2 project as a demonstrator for production runs at unprecedented resolution on pre-exascale supercomputers. We present here the first 0RCA36 configuration and the first results of a simulation performed on several months forced

by ERAinterim with NEMO 4. We compare it with its twin global ¼° and 1/12° configurations. We also present some results of NEMO 4/ORCA36 performances and scalability, performed by BSC on Mare Nostrum supercomputer.