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IFS on AWS - Running RAPS in the cloud

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Maxar was contracted by the European Center for Medium-Range Weather Forecasts (ECMWF) to run a selection of the modeling systems contained in the Real Applications on Parallel Systems (RAPS) on Amazon Web Services (AWS) cloud computing resources. The scope of work was limited to running the 'high-resolution forecast' configuration of the atmospheric model Integrated Forecast System (IFS), coupled to the ocean model Nucleus for European Modelling of the Ocean (NEMO) and to the Wave Model (WAM).

This presentation will report on the work to run RAPS in the cloud.

Starting from the transfer of data and compilation, to simple tests of uncoupled IFS at low resolution, to IFS run at a resolution of TCo1279L137 coupled with NEMO and WAM. Performance and scaling results will be presented, as well as comparisons to twin runs on the Cray XC40. Some discussion of the costs of running in the cloud will be included.

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