

1. Provide HPC expertise for the performance of Earth system models
2. Collaborate with other BSC departments, especially Computer Sciences, to use state-of-the-art programming models and profiling tools to prepare the next generation of Earth sciences models for developing exascale HPC systems (with emphasis in the models developed and/or used within the department). In this roadmap, performance analysis, identification of bottlenecks and the application of optimizations will be used on a regular basis.
3. Collaborate with external Earth system modelling teams and model users to provide expertise based on HPC performance analyses and define new use cases.
4. Research on new and more efficient computational approaches to apply on Earth system models
5. Collaborate with external Earth system modelling teams and HPC vendors to implement and test new coding approaches that allow the use of new platforms such as heterogeneous architectures.

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