





- Enhancing software performance through code modeling and measurement; understanding how to improve runtime effectiveness of applications
- Techniques and tools - including automated approaches, new metrics, and reference data - for testing, analysis, validation, and verification
- Techniques and tools for assessing engineering risks and tradeoffs and estimating and balancing developmental and operational costs
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Briefings with IT 'User' Agencies

Multiscale Modeling Workshop Planned



Selected FY 2004 Activities and FY 2005 Plans

NOAA SDP activities focus on using two software modeling frameworks:

Flexible Modeling System (FMS) – NOAA’s Geophysical Fluids Dynamic Lab (GFDL) uses the FMS programming structure to develop atmospheric, ocean, and coupled climate models for climate projection studies.

Earth System Modeling Framework (ESMF) – ESMF, the next-generation community-wide version of FMS, is being worked on by GFDL in collaboration with NASA, NSF’s National Center for Atmospheric Research (NCAR), the university community, and NOAA’s National Weather Service (NWS).

The challenges of building increasingly interdisciplinary Earth system models and the need to maximize the performance of the models on a variety of compu in

architectures, especially those using upwards of thousands of processors, necessitates a new program structure. This structure allows physical, chemical, and biological scientists to focus on implementing their specific model components. Software engussitr the ndevsignand bplementithe masorialte