EPA's Center of Excellence for Environmental Computational Science

EPA Science Forum 2004
Healthy Communities and Ecosystems

Using today's emerging IT solutions to collaboratively transform tomorrow's environmental decision making

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Goals

Through the ***Environmental Science Portal***, the ***Center for Advanced Computational Models and Tools***, and the ***Network of Environmental Applications***, the Center of Excellence will:

- Strengthen environmental decision making
- Support collaboration and information sharing
- Provide access to high-end computing and storage resources, expertise, and improved access to environmental data and applications

Environmental Science Portal

- Science on demand
- Customized content
- Secure single-point access to resources
- Integrates environmental science and delivers robust tools to decision makers

Accomplishments

- Framework selected
- Requirements analysis done
- Advisory group formed
- Prototype designed and operational

Center for Advanced Computational Models and Tools

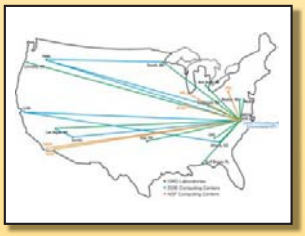
- Addresses complex environmental problems with high-end computational models
- Engages top-scientists
- Forms bridge between cutting edge IT and high-end applications to achieve advanced science solutions

Accomplishments

- Delivered optimized Community Multiscale Air Quality (CMAQ) to Western Regional Air Partnership (WRAP), NY, NC
- Storage of CMAQ results using data grid services
- Access to expertise and consulting

Network of Environmental Applications

- Gives States, Tribes and local communities reasonably priced access to compute and storage resources
- Offers suite of expertise that can be tapped by States, Tribes, local communities, academia, and others requiring environmental models and tools
- Leverages private industry in managing the efficient use of IT resources



Accomplishments

- Tested data grid services by exchanging data with WRAP
- Demonstrated ability to transfer and archive large data sets (16 GB/day)
- Tested compute grid services for executing CMAQ remotely

Delivering Science-Based Information to Decision Makers

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