

Web Services: A Mechanism for Across-the-Internet On-Demand Computing and Communication

AGENDA

Wednesday, June 8, 2005, 9 AM - 5 PM

Objectives: What are web services and why do we want/need them?
Target audience: Scientists, project coordinators/administrators, students.

INTRODUCTIONS

- * Why use distributed (remote) computing in contrast to local computing? Advantages offered by across-the-Internet on-demand computing (such as access to compute resources, commonality of codes, code updates, access to evolving databases and data archives maintained elsewhere).
- * Design factors for across-the-Internet services based on application. Current methods (applets, php, simple database access) versus new methods. What are client-side and server-side components and what do they do?
- * Overview of four primary distributed methods: *servlets*, *CORBA*, *java-RMI*, *web services*. What do they do, how do they work, what applications are they better suited to do? Examples.

WEB SERVICES

- * What is a Web Service - an earth scientist's view. What is a web service and what can it do for us in the geosciences? Examples of web services versus other distributed access methods.
- * What is a Web Service - an IT view. what is a web service and how does one work. Introduction of key ideas regarding clients & servers, across-the-Internet communication, security. GUIs and wrapping legacy codes. Needed resources to make and host one. Future directions.

SUMMARIES/EXAMPLES

- * Examples: Geoinformatics and IT research projects which use both web services and other distributed computing methods.
- * Future perspectives for a scientific community's distributed work environment. Community library of geoscience web services. Sharing codes, linking of multidisciplinary functionality. Access to community databases, archives, data products. Delivery mechanism for EarthScope data and knowledge products.