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Framework



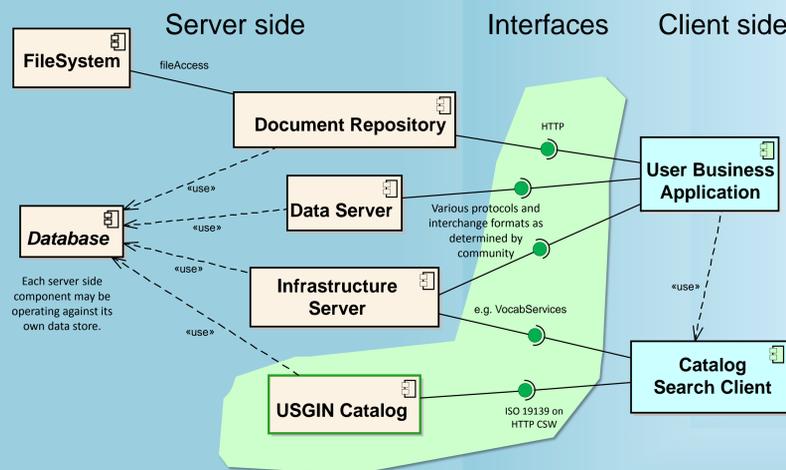
USGIN

DATA SHARING FOR
GEOSCIENCE

Web-based
Distributed
Open-source
Interoperable

What is USGIN: the Geoscience Information Network

Visit <http://usgin.org> for more overview information or <http://lab.usgin.org> for technical information, documents and discussion



The network is defined by a collection of shared web services and interchange formats that facilitate finding, accessing, and using geoscientific information, and a registry (catalog) of resources that use the services and formats.

The USGIN framework:

- ✓ Data publication using open specifications
- ✓ Community participation in development of specifications
- ✓ Registration of resources in interoperable catalog system
- ✓ Respect for data ownership, tracking of data provenance



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Implementation:



A coalition of State Geological Surveys (Association of American State Geologists, AASG) is creating a national, sustainable, distributed, interoperable network of data providers representing all 50 states that will develop, collect, serve, and maintain geothermal relevant data as an integral component of the National Geothermal Data System (NGDS, www.geothermaldata.org).

- U.S. Geoscience Information Network (USGIN) protocols and specifications provide the data integration framework.
- Goals:
 - enhance states' abilities to preserve and disseminate geothermal data
 - facilitate geothermal resource characterization and development
 - expand the scope of data available to the geothermal community
 - foster new services and applications built by third parties to take advantage of the system's capabilities and content
 - contribute materially to creation of a national geoinformatics system through implementation and deployment of NGDS
 - increase operational support for geoinformatics infrastructure through a broader user base.
- Data are made accessible by
 - digitizing at risk legacy, geothermal relevant data (paper records, samples, etc.)
 - publishing existing digital data using standard web and data services
 - limited collection of new data in areas lacking critical information.

<http://stategeothermaldata.org>
<http://catalog.usgin.org/search/>

Design, Build, and Contribute to National Geothermal Data System using USGIN Framework

Discover geothermal data

Geological surveys manage terabytes of data on geothermal energy. Here's how we get it from our hands to yours.

Geoscience Information Network data integration framework

Distributed data sources

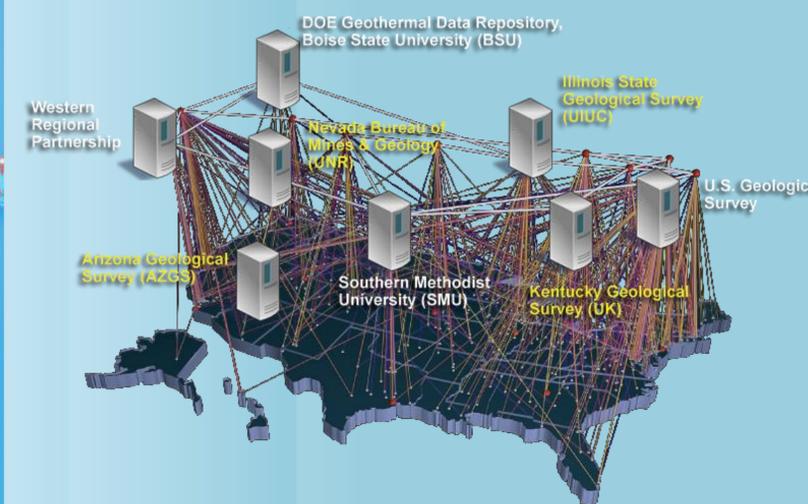
Distributed catalogs & directories

Web-based data integration

Data include everything from core samples, geochemical analyses, to geological maps and heat flow measurements

Open-source software tools

supported by:



Data nodes for all 50 states, Regional server & training hubs

Further Implementation

INTEROP-GIN: System design and demonstration

Validated as data integration mechanism by USGS Community for Data Integration

Metadata profile for upstream petroleum industry: Energy Industry Profile (EIP) ISO 19115



Data integration with 15 Federal Agencies and Governors in NM, AZ, UT, NV, CA; 10,000 GIS layers for land use management