WINDS National Geothermal Data System: Open Access to Geoscience Data, Maps, and Documents

NGDS

The dynamic project site <u>http://geothermaldata.org</u> serves as the information source and gateway to the system, allowing data and applications discovery and availability of the system's data feed. Map-centric web-based applications have been created to support finding, visualizing, mapping, and acquisition of data based on topic, location, provider, or key words.



GIS data available online through NGDS; figure originally produced for and published in Scientific American (2013).

USGIN

The U.S. Geoscience Information Network (USGIN) exposes, connects, and opens earth science data. USGIN is a federated information-sharing framework that uses free and open-source technology, capable of interacting with similarly configured data-sharing networks. This approach offers a long-term solution to data storage and sharing without any proprietary software.





USGIN framework

A redistributable, free and open-source software package called GIN-stack (USGIN software stack) was created to give data providers a simple way to release data using interoperable and shareable standards, upload data and documents, and expose those data as a node in the NGDS or any larger data system through a CSW endpoint. The easy-to-use interface is supported by OSS including Postgres, GeoServer, and custom CKAN extensions among others.

Free and Open-Source Codebase and Software

Web-based user application for account administration, metadata management, and contributing data to NGDS or other systems	USER ADMIN	WGDS
Structures and formats data to be interoperable	USGIN INFORMATION EXCHANGE TOOLKIT	W USGIN
Data portal pre-configured to manage and publish data	CKAN EXTENSIONS	Zckan
Search engine software to index and search your data	APACHE SOLR™	Asiche
SQL database management software	POSTGRESQL	(j)
Web mapping software to view and edit geospatial data	GEOSERVER	GeoServer
Software licensing	AFFERO GENERAL PUBLIC LICENSE	AGPLC Boustann Free as in Freedom
Required on		1
end operating system	LINUX	<u>C</u>
Admin & API compone	ents	
Data management & back-end component	ts.	
Public licensing standards		

Prerequisite OS

OGC-compliant map image and data web services allow users to access information with a variety of applications.



User-created models, tools, and scripts Community-driven systems are innovative, agile, and more likely to be useful and sustainable. USGIN accomplishes this through use of GitHub, developer blogs, a user-created tools site, and invitations to edit and create USGIN data models.



Use for third-party GIS applications







Community Experience:

NRRC DSS:

Another USGIN System Implementation The Arizona Natural Resources Council Decision Support System is another USGIN-styled system in

development – see our digital presentation for more!

