Deployment of GEOSS Clearinghouse Onto Azure

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Outline

- Introduction
- GEOSS Clearinghouse
- Deploying GEOSS Clearinghouse onto Microsoft Azure
- DEMO
Project Background

- **GEOSS Clearinghouse**
  - Metadata catalogues search facility for the Intergovernmental Group on Earth Observation (GEO).

Distribution of GEOSS Clearinghouse from June 15 to July 15, 2010

- **Cloud Enable GEOSS Clearinghouse**
GEOSS Clearinghouse Capabilities

- Metadata Create, Edit, Management and Visualization
- Administration
  - User Management
  - Harvesting
- Search
User Management

Diagram showing the process of user management, including cataloging, harvesting, admin services, clearinghouse, editing, searching, viewing, and grouping. The user interface is also shown, with fields for username, password, last name, first name, address, city, state, zip, country, email, organization, department, field, and role.
Harvesting

- Harvest EveryRecords
  + doHarvest()
  + ()

Harvester
- GetRecords and Begin Harvest
  + Search()
  + GetRecords()
  + Harvest()

XHarvest

Catalog

JEEVES

Parameters

Stylesheet

GeoNetwork

GEOSS Clearinghouse

Harvesting Management

- Catalogue Services for the E&O Profile 2.0
- GeoNetwork and Service Register
- ISCC Web services (e.g., WMS, WFS, WCS, WPS, CSW)
- OGC and ISO standards
- GEOSS GeoNetwork Search
- ISO 19115 Metadata Harvesting 2.0
- Metadata fragments from OGC
- ISCC GeoNetwork
Local Search

GEOSS Clearinghouse CSW API

<table>
<thead>
<tr>
<th>Operations</th>
<th>Status</th>
<th>Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>GetCapabilities</td>
<td>Mandatory</td>
<td>Yes</td>
</tr>
<tr>
<td>DescribeRecord</td>
<td>Mandatory</td>
<td>Yes</td>
</tr>
<tr>
<td>GetRecords</td>
<td>Mandatory</td>
<td>Yes</td>
</tr>
<tr>
<td>GetRecordByID</td>
<td>Optional</td>
<td>Yes</td>
</tr>
<tr>
<td>GetDomain</td>
<td>Optional</td>
<td>Yes</td>
</tr>
<tr>
<td>Transaction</td>
<td>Optional</td>
<td>Yes</td>
</tr>
<tr>
<td>Harvest</td>
<td>Optional</td>
<td>No</td>
</tr>
</tbody>
</table>
Deployment of GEOSS Clearinghouse on Azure

1. Set up Developing Environment
2. Set up firewall rules for Storage, DB, App
3. Import Data to SQL Azure
4. Run and Test App

Remote Desktop Access

1. Launch a Service
2. Upload Package and Configuration file to Azure Storage
3. Pack App
Deployment of GEOSS Clearinghouse on Azure

[Image of Windows Azure Platform interface with highlighted text: "http://geossdceringhouse.cloudapp.net"]
Geoss Clearinghouse Demo.....
Let’s get Started

GeoNetwork - The portal to spatial data and information - Mozilla Firefox


Management Portal - Windows Azu...

GeoNetwork - The portal to spatial data and information - Mozilla Firefox

GEOSS Clearinghouse

WHAT?

WHERE?

- Any -

Search

Reset Advanced

Find INTERACTIVE MAPS, GIS DATASETS, SATELLITE IMAGERY AND RELATED APPLICATIONS

GEONETWORK’S PURPOSE IS:

- To improve access to and integrated use of spatial data and information
- To support decision making
- To promote multidisciplinary approaches to sustainable development
- To enhance understanding of the benefits of geographic information

GeoNetwork opensource allows to easily share geographically referenced thematic information between different organizations. For more information please contact.

Featured map

- FLORIDA_GEOLOGY
Multilanguage

GEOSS Clearinghouse

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Featured map
- FLORIDA_GEOLOGY
Let's Check the metadata
Let’s check the metadata standards

GEOSS Clearinghouse

Metadata constraints
Use limitation
This metadata record is publicly available.

Metadata
File identifier: GB-NERC-BAS-AEDC-00002
Metadata language: English
Character set: UTF8: 8-bit variable-size UCS Transfer Format, based on ISO/IEC 10646
Dataset: Information applies to the dataset
Datestamp: 2004-10-01
Metadata standard name: Geographic information § Metadata § Part 5: Extensions for imagery and gridded data
Metadata standard version: ISO 19115-2:2009(E)

This metadata record is publicly available.

Let's check the metadata in XML
Metadata Edit and Management
Editing
Categories
Recent Changes

GEOSS Clearinghouse

- Case studies, best practices
- Conference proceedings
- Datasets
- Directories
- Interactive resources
- Maps & graphics
- Other information resources
- Photo
- WFS
- WMS

GeoRSS

Locality in Victoria

- Massachusetts_Geology
- Illinois_Geology
- Kansas_Geology
- Delaware_Geology
- Vermont_Geology
- Virginia_Geology
- Arizona_Geology
- California_Geology
- Georgia_Geology

Abstract: Automatic data loggers are often used to monitor environmental variables such as temperature (of air and soil), humidity, wind speed and radiation in microclimates where experimental or ecological st...

Identification info

- Title: Antarctic Microclimate Data
- Alternate title: Antarctic Microclimate Data
- Alternate title: Antarctic Microclimate Data
- Data: 2004-10-01
- Data type: Publication: Date identifies when the resource was issued
- Code: GIBERG-053-EADC-00902 > Antarctic Microclimate Data

Cited responsible party

- Individual name: PEAT, HELEN
- Processed: Party who has processed the data in a manner such that the resource has been modified

Cited responsible party

- Individual name: British Antarctic Survey
- Author: Party who created the resource

Cited responsible party

- Individual name: British Antarctic Survey
Harvesting (1)
Harvesting (2)

<table>
<thead>
<tr>
<th>HARVESTING MANAGEMENT</th>
<th>Select Name</th>
<th>Type</th>
<th>Status</th>
<th>Errors Every</th>
<th>Last run</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>USGS WMS</td>
<td>Web DAY</td>
<td></td>
<td>0:1:30</td>
<td></td>
<td>2011-03-17 14:57:00</td>
<td>Edit</td>
</tr>
</tbody>
</table>

- Activate
- Deactivate
- Run
- Remove
- Back
- Add
- Refresh
Harvesting (3)
Harvesting (4)
Acknowledgements

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Thank You!

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Azure GEOSS Instance
http://geoss.clearinghouse.cloudapp.net/
Amazon EC2 Instance
http://ec2-50-16-60-71.compute-1.amazonaws.com/geonetwork/