CloudMapper - oceanographic data in the cloud (eventually)

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Motivation

• Existing Access databases
• Outdated, hard to maintain, poor geospatial analysis capabilities
• Single Oracle database
• Map-based interface
• Enhanced analysis capabilities
• Future deployment on cloud resources
Data entry and selection

EcoFOCI Trawl Haul Position Form

COD Edit Form

Performance:
- good
- Data
- other
- information
- work
- duration
- Distance
- fish
- lat
- lon
- comments
- New
- 003
- 25.78
- 15.71W
- Depth
- Flowmeter
- TWS
- Add
- New
- Sample
Tabular output
Rudimentary mapping

CSV file for further analysis
Project steps

• Design single Oracle
• Load data from existing databases
• Prototype front-end created in ArcServer
• Flex viewer, user authentication
• Link to ArcGIS for further analyses
• Test deployment on an Amazon cloud hosted instance of ArcServer
• LDAP authentication
• ArcServer security as an option
Main interface
Data selection and tools
Forms based-data selection
Map based data selection
Implementation in the cloud

• Technically straightforward
• Authentication allows public presence of web front end
• Limiting denial of service attacks
• Security concerns about cloud deployment
• FISMA certification
• Updates and recertification