

The VOEIS HIS Gateway: A REST Interface for a HydroServer using ODM 1.1

Pol Llovet*, Research Computing Group, Montana State University, Bozeman, MT,
pol.llovet@gmail.com

Clemente Izurieta, Department of Computer Science, Montana State University, Bozeman, MT,
USA, clemente.izurieta@cs.montana.edu

Sean Cleveland, Research Computing Group, Montana State University, Bozeman, MT,
sean.b.cleveland@gmail.com

The Virtual Observatory and Ecological Informatics System (VOEIS) is designed to allow investigators to store, manage and publish their hydrological and meteorological data. VOEIS supports the process of evaluating raw observations, sample and sensor readings to fully curated data-sets. A specific goal of the VOEIS project is to integrate with the CUAHSI HIS tools through HydroServer. In order for VOEIS to leverage the power of the CUAHSI HydroServer and its corresponding suite of tools, a fully functional REST interface that allows for the pulling and pushing of data objects was needed. We have constructed a HIS gateway using Ruby, Sinatra and the DataMapper ORM to provide the necessary REST functionality. Associated requirements for the HIS gateway include a simple authorization system to prevent malicious access, and the ability to serve up JSON and XML results from simple URL style queries that can behave like full APIs to the ODM data-store. The initial implementation of the VOEIS HIS gateway is currently available for use as a stand alone JRUBY server application that can be deployed on any platform and configured to connect to any ODM database.