Connecting IDL/ENVI on the Cloud through a Drupal Module: introducing the IDL/ENVI Bridge Module (1.0) from Science on Drupal Central

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Drupal 7 module administration-view exposes ENVI & IDL SE commands*

What’s on the Server? ENVI & IDL Services Engine For Web-Accessible Multi- & Hyperspectral Applications

Introduction
The geospatial community, including the field of environmental imaging spectroscopy, has a growing need for online on-demand analytic capabilities.

Work previously done on desktop workstations will migrate to a web-accessible environment to mitigates growing data volumes, bandwidth usage, and end user requirements.

Web-based applications (or ‘apps’) are intended to apply analytic methods, procedures, and routines to image datasets stored within centralized server repositories.

Exelis Visual Information Solutions (Exelis VIS) developed an enterprise-enabled processing engine, the ENVI & IDL Services Engine (ISE), that provides remote users access to the power of ENVI image analytics and IDL applications from a web or mobile client interface.

Background
The ENVI and IDL Services Engine (ISE), deploys data access, analytics, and visualization capabilities to the enterprise, either in the cloud, or within the data storage enterprise.

ISE can interoperate with any middleware (e.g. ArcGIS Server or GeoServer), meaning users can readily implement this capability using their current enterprise architecture.

Once an ENVI or IDL routine (i.e. application) is developed, it’s simple to wrap it as a service and deploy it in ISE for consumption by remote end users, other apps, or services running in the enterprise.

The ENVI Services Engine provides REST-compliant web services. In particular, it is based on EIPS GeoProcessing REST specification, which is expected to be adopted by the Open Geospatial Consortium (OGC).

ISE responds to processing requests by forming an HTTP-REST call to the ISE via an identified RESTful interface. The REST interface maps to the EIPS from an intermediate component that subsequently calls and runs ENVI and IDL routines, with the results being pushed back through the middleware components to the requesting application. See Figure 1.

The ENVI Services Engine is able to scale and load balance because of its REST architecture and designed to run on a cluster. As requests arrive from any number of clients, the master web server will accept and route the request. If the request is for information about a task (or the system in general) then the master will return the requested information to the client. If the request is to perform a task, then the master will give the request to one of its worker processes. See Figure 2.

Now you can configure your Earth data image properties inside Drupal.
So your web developer can be tasked to format your data image and user interactivity without a line of code.

*The module requires a current license to the ENVI & IDL Services Engine and to IDL and/or ENVI.

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