ERDAS APOLLO Essentials -SDI Product Description

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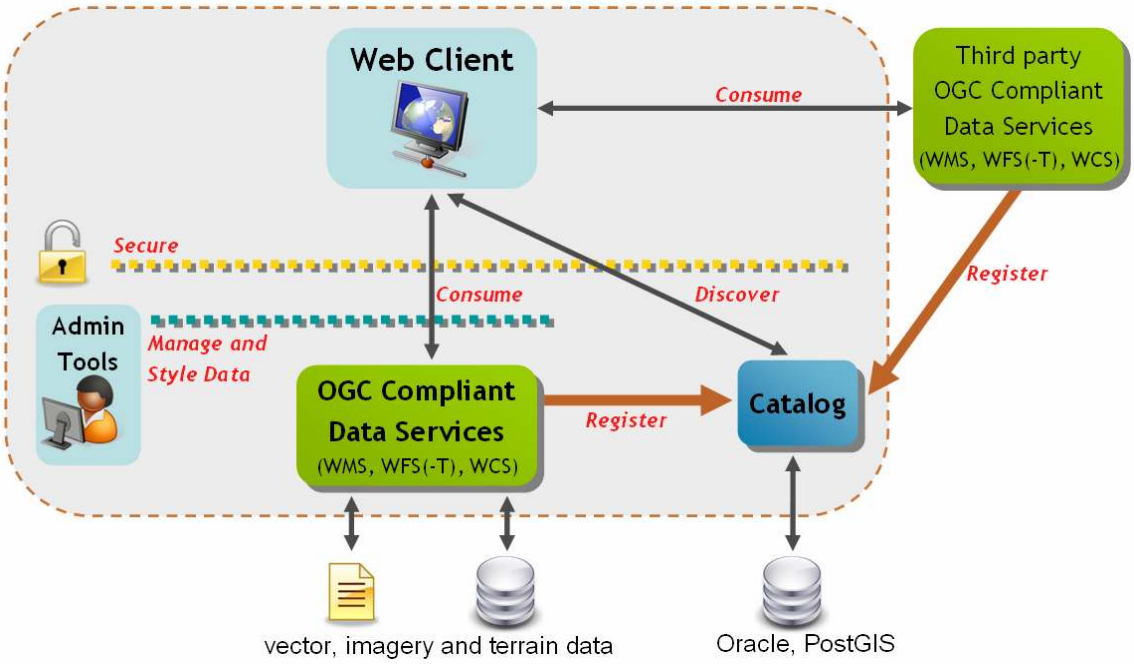
ERDAS APOLLO Essentials - SDI

Product Description

Overview

ERDAS APOLLO Essentials - SDI *2011* is an interoperable Spatial Data Infrastructure to catalog and deliver your enterprise geospatial data over the web. Truly scalable through clustering, ERDAS APOLLO Essentials - SDI allows styling, securing, publishing and cataloging vector, raster and terrain data via fully compliant OGC® data services. A user-friendly web client provides data discovery, styling and visualization, and implements a complete vector data filtering, export and edition workflow. ERDAS APOLLO Essentials - SDI is the core module of any ERDAS APOLLO solution; self-sufficient for meeting common use cases, it can be completed by the other modules of the ERDAS APOLLO Suite for fulfilling the most sophisticated business workflows.



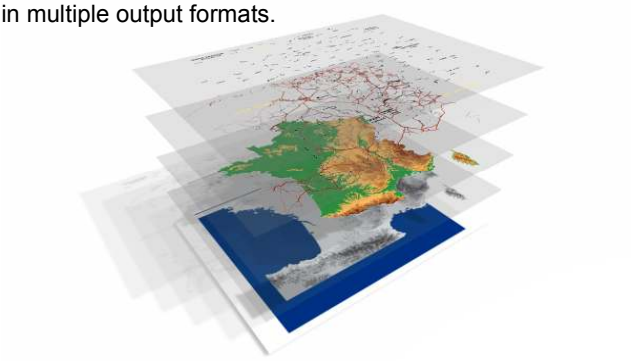
Typical Workflow

Publish, style, secure and catalog vector, imagery and terrain data through OGC-compliant web services.

1. Publish vector, imagery and terrain data using OGC-compliant web services
2. Define scale-dependent styling, allowing multiple user-defined maps to be generated from a single source
3. Build and configure Web Map Context (WMC) files allowing instant work environment setup
4. Apply role-based, fine-grained and geospatial security
5. Catalog ERDAS APOLLO services and any OGC-compliant services for easy data discovery
6. Catalog and publish business data (documents, movies, pictures, any electronic content)
7. Discover, visualize and navigate the data using the ERDAS APOLLO Web Client
8. Find, filter, edit and export vector data using the ERDAS APOLLO Web Client

Key Features

Geospatial Data Publishing Capabilities – ERDAS APOLLO Essentials - SDI publishes many types of geospatial data through OGC-compliant web services, allowing combined visualization of all information layers, as well as data selection, filtering and export in multiple output formats.



Input Data Formats – One of the main problems of GIS professionals is the heterogeneity of data formats. ERDAS APOLLO Essentials - SDI allows enabling and using legacy and third-party data together in a common environment.

Data Type	Vector	Images	Imagery	Sensors	Terrain	Metadata
Service interfaces	WFS(-T)/WMS	WMS	WCS/WMS	WCS/WMS	WCS/WMS	All
Input formats	GML, ESRI Shapefile, MIF/MID, Oracle Spatial, PostGIS, ArcSDE	Including JPG, GIF, PNG, BMP, TIFF, WBMP, TGA, PCX	Including GeoTIFF, ECW, OTDF, ALG, ERS, JPEG2000, NITF, HFA (IMAGINE), MrSid, NetCdf, GRIB, BIL/BSQ, CADRG, Hdf4, Hdf5, Hdf-EOS, Oracle Georaster, ArcSDE Raster	Including Landsat, Ikonos, QuickBird, Spot, Envisat, RadarSat, ERS, Lidar	DTED, DEM, LAS	ISO 19115/ 19139

The ERDAS APOLLO Solution Toolkit allows extension of these supported capabilities to new, custom or classified formats, at the source of your workflow.

Output Formats – Supporting multiple output formats increases the interoperability of OGC Web Services. ERDAS APOLLO Essentials - SDI supports numerous vector and raster output formats and allows smooth interaction with many CAD and GIS applications, such as ERDAS IMAGINE®, ERDAS TITAN, ERDAS APOLLO Web Client, Google Earth™, AutoCAD®, ArcGIS®, open source OGC clients, and custom applications.

Data Type	Vector	Images	Imagery	Terrain	Metadata
Service interface	WFS(-T)	WMS	WCS	WCS	All
Output formats	GML, GeoRSS, ESRI Shapefile	JPG, GIF, PNG, TIFF, WBMP, KML, SVG	GeoTIFF, ECW, JPEG2000, NITF, IMG (IMAGINE)	DTED	ISO 19115/19139

Due to configurable styling and on-the-fly rendering, the WCS and WFS services automatically expose a WMS interface, providing JPG, GIF, PNG, TIFF, WBMP and KML output on vector, imagery, terrain and sensors inputs.

Interoperability Based on Open Standards – Based on the open standards of the Open Geospatial Consortium (OGC®) and the International Standardization Organization (ISO), ERDAS APOLLO Essentials - SDI is an interoperable platform allowing enterprises to share their data internally and with a third party. The compliant Web Map Service (WMS), Web Feature Service (WFS and WFS-T) and Web Coverage Service (WCS) coupled with mature support for GML 3 and ISO 19115/19139 metadata give ERDAS APOLLO Essentials - SDI the ability to communicate with any GIS or CAD application supporting those standards. Supported standards include:

OGC specification	Supported OGC specification versions	ISO specification
OGC Web Map Service (WMS)	**WMS 1.3.0**, **WMS 1.1.1,** WMS 1.1, WMS 1.0, WMS-WSDL 0.1.0, WMS POST 0.0.3	ISO 19128
OGC Web Feature Service (WFS-T)	WFS1.2, WFS 1.1, **WFS 1.0**, **WFS(T) 1.0**	ISO 19142
OGC Web Coverage Service (WCS)	**WCS 1.0.0**, WCS-WSDL 0.1.0	
OGC Catalog Service Web (CS-W)	**CS-W 2.0.2**, CAT2 AP ebRIM 1.0.0	
OGC Web Map Context (WMC)	WMC 1.1, WMC 1.0, WMC 0.1.7	
Styled Layer Descriptor (SLD)	SLD 1.0	
Geographic Markup Language (GML)	GML 3.2.1, GML 3.1.1, GML 2.1.2, GMLsf 1.0.0	ISO 19136
Filter Encoding	Filter 1.2, Filter 1.1, Filter 1.0	ISO 19143
Metadata		ISO 19115/19139
Others	KML 2.1.0, WSDL/SOAP/UDDI 1.0, SOAP 0.8, URN 1.1.0, URN 1.0.0, GeoRSS 1.0.0, OWS common 0.3.0, Gaz 0.8	

ERDAS APOLLO successfully passes the OGC CITE compliance tests for the blue-labeled specifications.

Data Services – On-the-fly data processing

All ERDAS APOLLO Web Services support on-the-fly:

- Reprojection
- Contextual rendering and styling
- Format conversion
- Temporal or attribute-based selection
- Spatial subset creation
- Data export

ERDAS APOLLO Imagery Web Services support on-the-fly:

- Mosaicking
- Band selection and ordering
- Imagery pyramids creation

ERDAS APOLLO Vector Web Services support on-the-fly:

- Filtering
- Editing

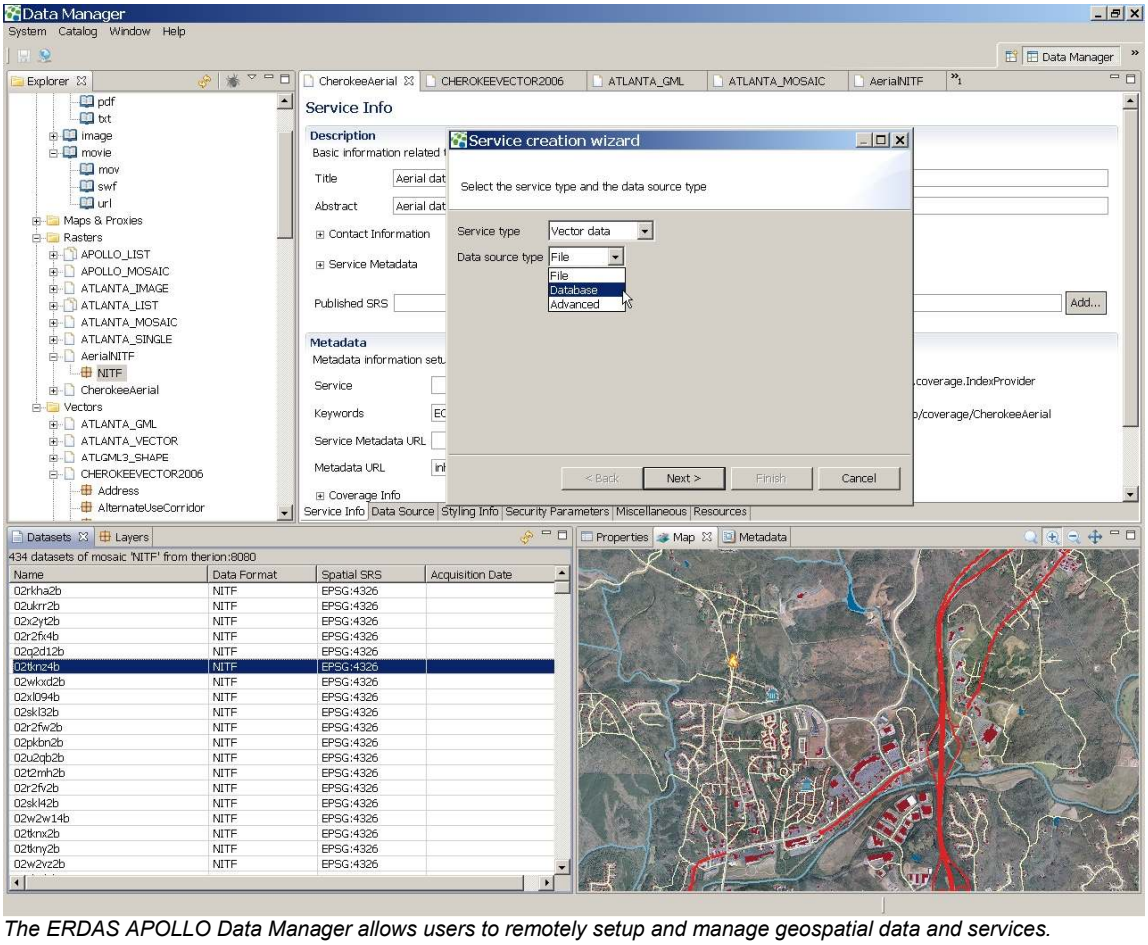
Data Management – ERDAS APOLLO Essentials – SDI 2011 provides a new desktop client to remotely set up and manage geospatial data and services. The Data Manager can be fully internationalized.

The Data Manager user interface allows users to:

- Instantly set up OGC Web Services on vector, imagery and terrain data, using intuitive wizards
- Catalog custom objects (documents, pictures, movies, URLs, any electronic content)
- Fully configure the services metadata, behavior and properties using service editors
- Automatically register and update services in the catalog
- Manage imagery datasets (add, delete, view properties)

Multiple intuitive tools are included to automatically:

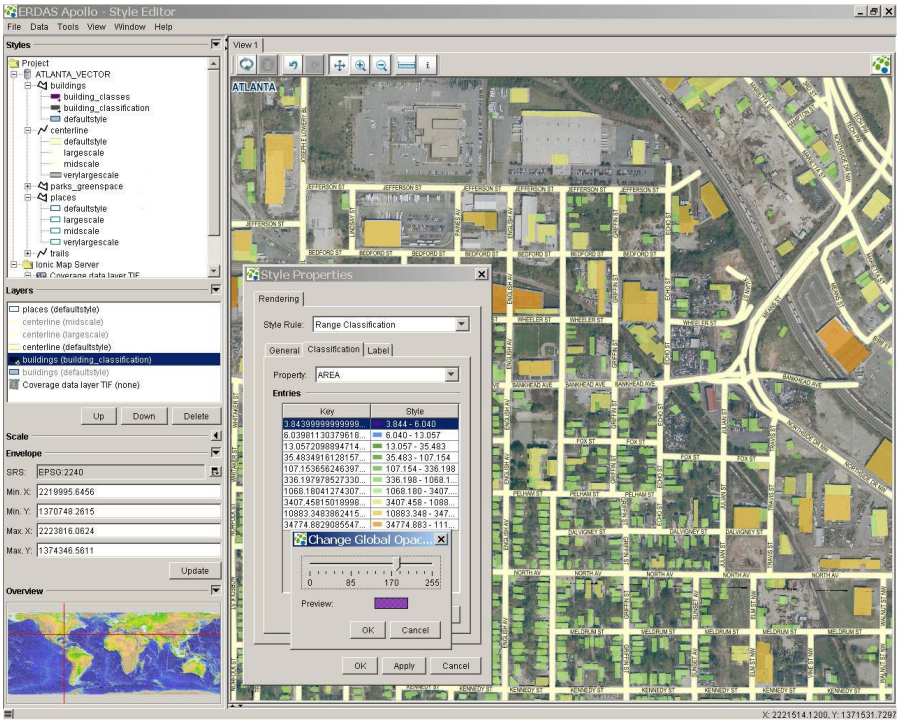
- Index data
- Compute mosaic pyramids
- Generate vector data schema and mapping
- Style imagery data (band selection, contrast enhancement, hill-shading and color mapping)
- Upload data on the server or remotely browse the server data folders
- Instantly visualize your services with the map tool
- Edit service layers' ISO metadata (ISO 19115/19139 1.0 and ANZLIC compliant)



The ERDAS APOLLO Data Manager allows users to remotely setup and manage geospatial data and services.

Styling and Portrayal Capabilities – ERDAS APOLLO Essentials - SDI allows visualization of both raster and vector geospatial objects. ERDAS APOLLO Essentials - SDI has a built-in portrayal engine that provides on-the-fly contextual rendering through the OGC Web Map Service (WMS) interface, with Styled Layer Descriptor (SLD) support. This allows data providers and users to define multiple styles for each data source and to visualize them in many different ways. The creation and support of the Web Map Context (WMC) files through the whole chain also provides scale-dependent styling.

Data Type	Vector	Imagery/Terrain
Service Interfaces	WFS(-T) ⇒ WMS	WCS ⇒ WMS
Styling	Stroke (color, cap, join and dashing), fill color, labels, markers, symbols, discrete/range classification, clash management…	contrast enhancement, color mapping (discrete classifications), hill shading



With the ERDAS APOLLO Style Editor, apply scale-dependent styles to vector data and create a Web Map Context to be visualized in the ERDAS APOLLO Web Client.

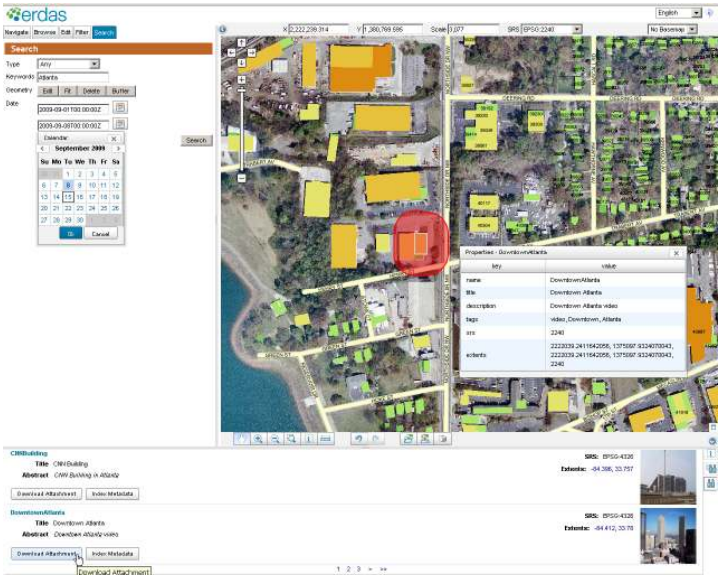
Vector Workflow – ERDAS APOLLO Essentials - SDI offers a complete workflow for vector data, including the ability to edit and update vector data geometry and attributes, using a Transactional Web Feature Service (WFS-T). Whatever the feature data model, the data manager can automatically generate and customize the mapping between the data properties and attributes and the feature model exposed by the ERDAS APOLLO WFS. The ERDAS APOLLO WFS supports advanced finding, filtering, edition and export functionalities that are offered to the end user through the ERDAS APOLLO Web Client. These functionalities are also usable by any external client application compliant with WFS(-T).

Discovery / Cataloguing – With ERDAS APOLLO Essentials - SDI, easily catalog ERDAS APOLLO web services, any OGC-compliant third-party web service, and custom objects (documents, movies, pictures, URLs, any electronic content). The ERDAS APOLLO Catalog automatically harvests web services and retrieves their metadata, including spatial extent, keywords, title and thumbnails. Web services metadata are automatically exposed through an OGC compliant CS-W ebRIM web interface, as well as through RESTful endpoints.

Register your ERDAS APOLLO services or any OGC-compliant service to the ERDAS APOLLO catalog, to enable smart data retrieval by the users.

The ERDAS APOLLO Web Client allows discovery and consumption of services and custom objects:

- Search by object type, keywords, spatial footprint (box, point, line, polygon) and registration date
- Quickly select the data of interest using helpful result thumbnails and metadata
- Visualize service layers on the maps
- Find and download business data (documents, movies, any electronic content…)



The ERDAS APOLLO Web Client enables searching of the ERADS APOLLO Catalog so users can find and consume geospatial data.

End User Web Client – ERDAS APOLLO Essentials - SDI offers the end user a rich Web Client to consume

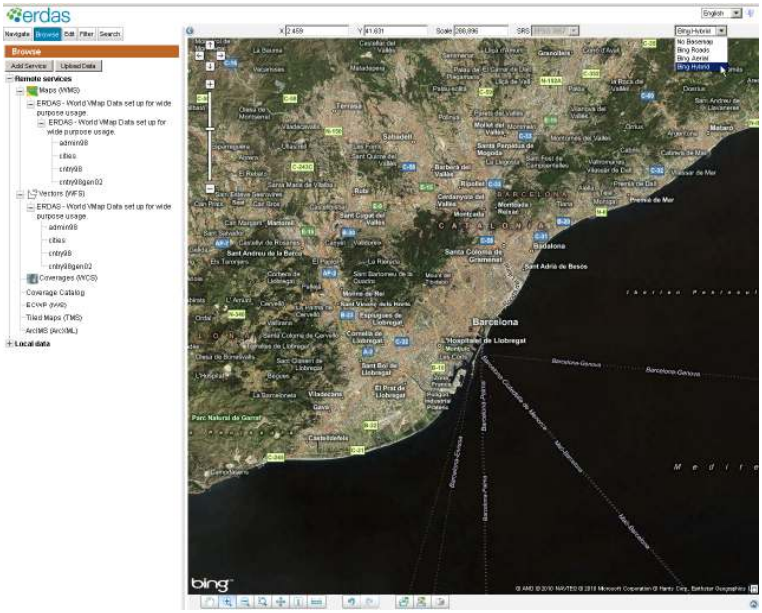
- All ERDAS APOLLO OGC Web Services
- ECWP streaming from ERDAS APOLLO Essentials - Image Web Server
- Any third-party OGC-compliant Web Services

Through ERDAS APOLLO Web Client, users can:

- Discover data via several means: by searching the catalog, by typing the URL of a known OGC or ECWP Web Service, or by uploading local data.
- Manage and configure map contexts (WMC): either an existing context or a new context created with the discovered services. This allows configuring and sharing Geospatial workspaces.
- Navigate and visualize the data in the most appropriate projection.
- Configure the geospatial data rendering/styling, for example by mapping colors on range of values.
- In a vector data workflow, the web client allows finding and selecting features (i.e. individual instances of some vector data) and visualizing their properties and attributes with a simple mouse click. The features' alphanumeric and geometric properties can be edited and a new feature can be created from scratch.
- Leveraging advanced WFS functionality, ERDAS APOLLO web client also allows finding and filtering vector data, by defining a filter on spatial extent and alphanumeric properties. The filtered data can be displayed on the map or be exported as GML, Shapefile or KML files for seamless visualization and exploitation in GIS and CAD applications.
- Define a working geometry by drawing on the map, selecting on the map or uploading a shapefile, and apply a buffer to the selected geometry. This advanced geometry selection tool is available for searching and filtering data.

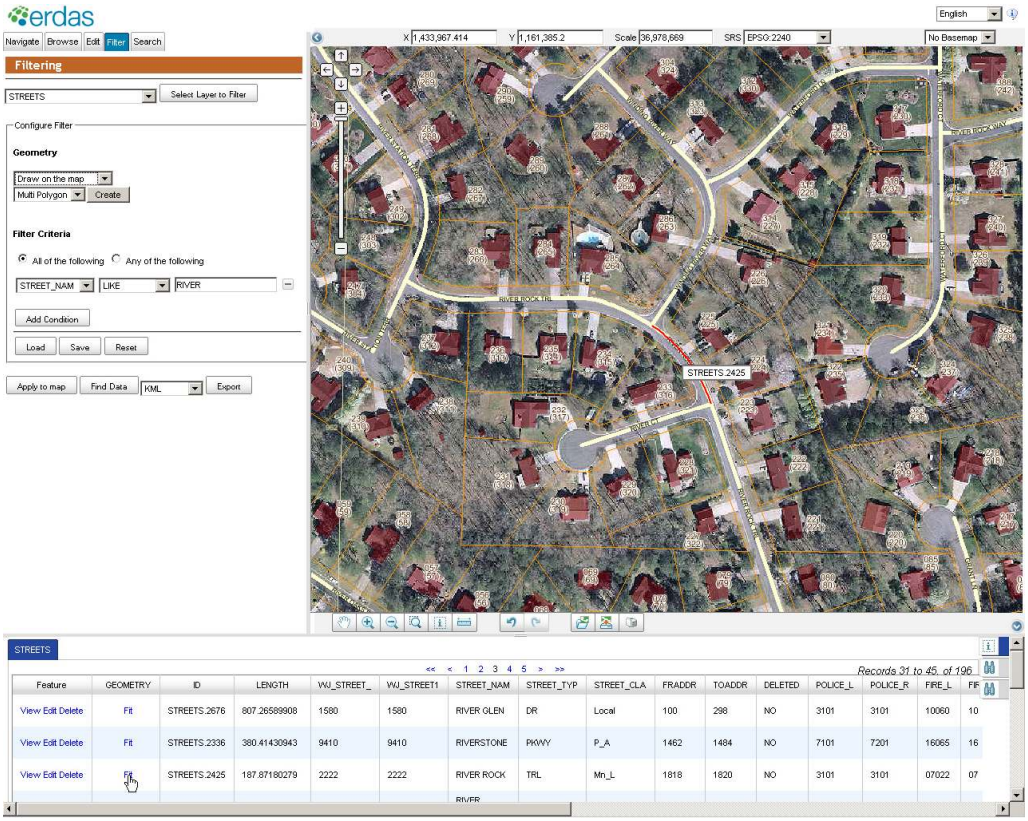
The ERDAS APOLLO Web Client provides a direct access to Internet-based Microsoft Bing™ Maps[1], providing a premium map experience to the end users. Three map sources are available from Bing Maps Platform:

- Bing Maps Roads - Map with labels and roads
- Bing Maps Aerial - Aerial Imagery map
- Bing Maps Hybrid - Aerial map with labels and roads



[1] The ERDAS APOLLO license provides Bing Maps base maps for users operating within your organization only. If your ERDAS APOLLO server is open to clients outside of your organization, Bing Maps can be enabled using credentials you obtain from Microsoft.

The ERDAS APOLLO Web Client can be extended and customized using the capabilities of the ERDAS APOLLO Solution Toolkit. The Web Client can be fully internationalized and provides multiple translations out-of-the-box.



In ERDAS APOLLO Web Client, build a spatial and alphanumerical filter to a vector layer and export the results to Shapefile, GML or KML.

Security – ERDAS APOLLO Essentials - SDI features a role-based security system, allowing definition of fine-grained and geospatial credentials at the service and layer levels.
For each layer of the service, the data manager can configure three types of security settings:

- Coarse-grained security, in order to authorize/deny service access per user role;
- Fine-grained security, in order to authorize/deny layer access per user role;
- Geospatial security:
    - Area credentials, in order to authorize/deny access to an area defined by a bounding box or polygon
    - Scale-range credentials, in order to deny access below a minimum and above a maximum scale per user role
    - Masking, in order to prevent any or precise visualization of an area defined by a bounding box or polygon. The polygon can be blurred, transparent or hidden by a color filling.

Enterprise Application Integration – ERDAS APOLLO Essentials - SDI is designed to fulfill the requirements of the most demanding enterprises. Fully scalable through clustering, ERDAS APOLLO Essentials - SDI smoothly supports the extension of your Geospatial Business System with improved performance. Proven technological standards such as Java EE also ease the integration of ERDAS APOLLO Essentials - SDI into IT environments, even security-wise.

About ERDAS

ERDAS – The Earth to Business Company – helps organizations harness the information of the changing earth for greater advantage.

ERDAS creates geospatial business systems that transform our earth's data into business information, enabling individuals, businesses and public agencies to quickly access, manage, process and share that information from anywhere.

Using secure geospatial information, ERDAS solutions improve employee, customer and partner visibility to information, enabling them to respond faster and collaborate better. It also means better decision-making, increased productivity and new revenue streams.

ERDAS is a part of the Hexagon Group, Sweden. For more information about ERDAS or its products and services, please call +1 770 776 3400, toll free +1 866 534 2286, or visit www.erdas.com.