HDF and ENVI Services Engine

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EXELIS

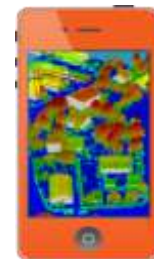# What is ESE?

ENVI Services Engine:
Image and Data Analytics for the Cloud and Enterprise

Cloud and/or enterprise-based processing engine which leverages the power of IDL, ENVI, and ENVI LiDAR analytics to create products for consumption by desktop, thin, or mobile clients. Because ESE analytics are performed server-side, these applications can retrieve, process, and publish data to the cloud without ever running any data I/O or processing on the client computer or device.

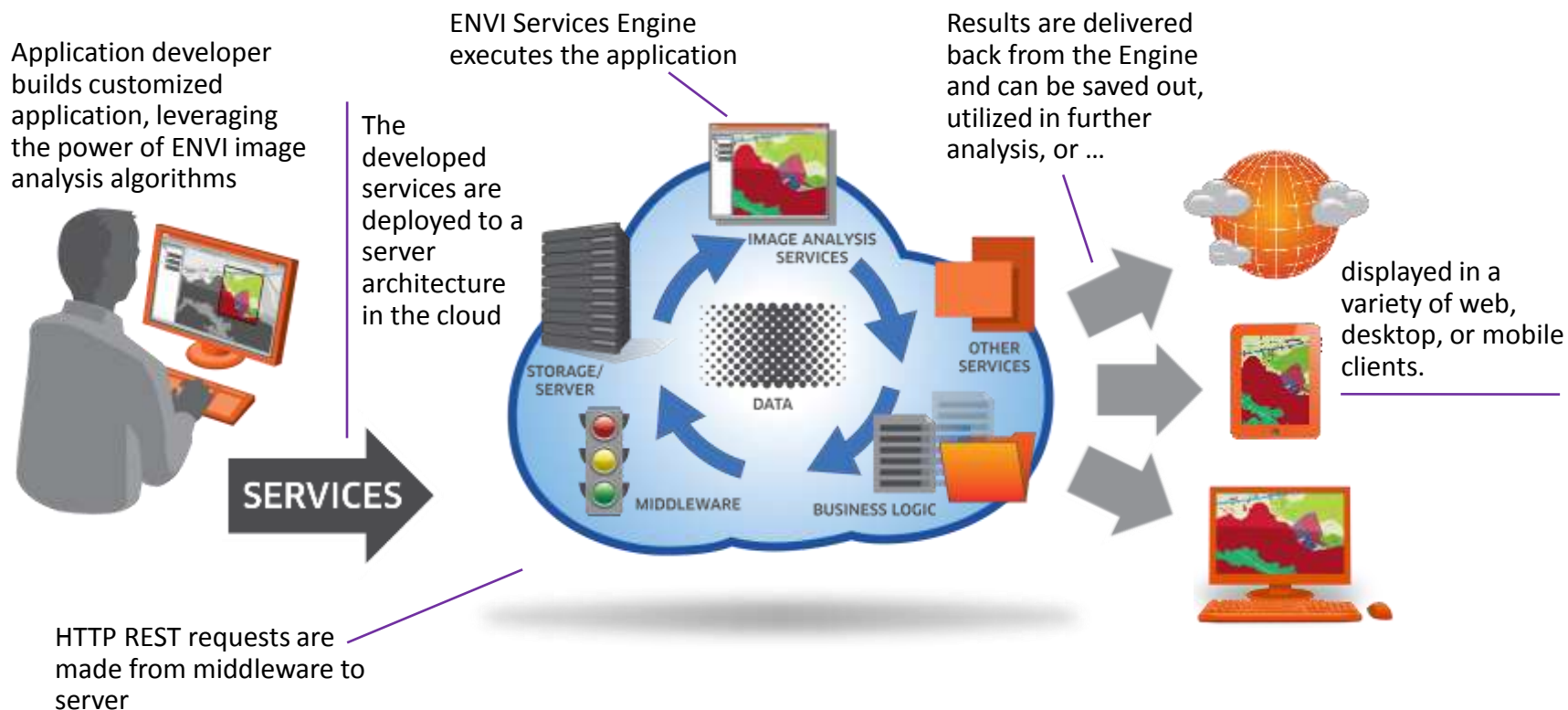A client can be anything that speaks HTTP, such as a webpage, IDL, C++, etc...

This allows developers to write applications in the language of their choice, then use ESE to do analytics using IDL, and the ENVI and ENVI LiDAR Application Programming Interface (API).

Because it is deployed on a server, it is always "on", giving you on-demand distributed processing over an enterprise network or on the web.

ENVI Services Engine Architecture

ENVI Services Engine executes the application

Application developer builds customized application, leveraging the power of ENVI image analysis algorithms

The developed services are deployed to a server architecture in the cloud

Results are delivered back from the Engine and can be saved out, utilized in further analysis, or …

displayed in a variety of web, desktop, or mobile clients.

HTTP REST requests are made from middleware to server

- Application developer builds custom applications
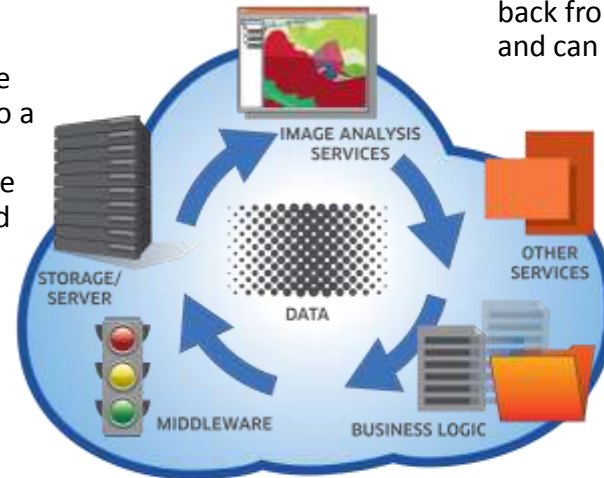- Developed services are deployed to a server architecture
- ENVI Services Engine executes the application
- Results are delivered back to ENVI Services Engine for further analysis, or…
- Results can be displayed on a desktop, across an enterprise, or on any device that has access to the world wide web

HDF ESE Architecture

We build customized NASA HDF-EOS visualization application, leveraging the existing IDL examples.

ENVI Services Engine executes the application

The developed services are deployed to a server architecture in the cloud

Results are delivered back from the Engine and can be …

IMAGE ANALYSIS SERVICES

STORAGE/ SERVER

DATA

OTHER SERVICES
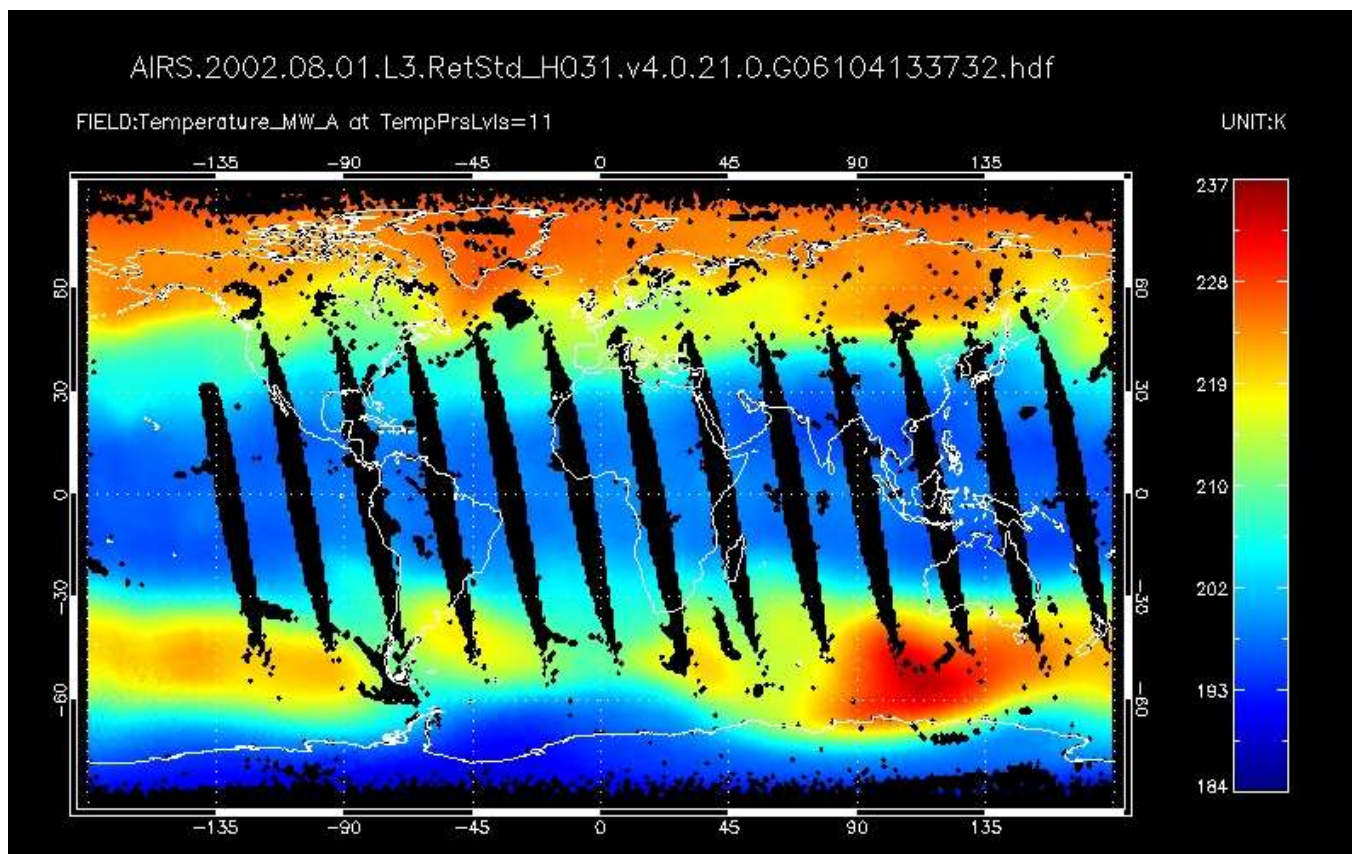
MIDDLEWARE

BUSINESS LOGIC

SERVICES

displayed in a variety of web, desktop, or mobile clients.

HTTP REST requests are made from middleware to server

- The HDF Group builds custom visualization applications for NASA HDF-EOS data.
- Developed NASA HDF-EOS services are deployed to a server architecture at The HDF Group
- ENVI Services Engine executes the NASA HDF-EOS visualization application
- Results can be displayed on a desktop, across an enterprise, or on any device that has access to the world wide web

EXELIS

NASA Product Specific Complete Code for visualization at http://hdfeos.org/zoo

How can we serve users better?

- Try IDL codes without purchase & installation

- Run everything with web browser
  - Mobile platforms are welcome!

- UX - simple and interactive

Demo

We need your input.

ESE can make your existing IDL program run as a web service. Super!

What kind of web services would you like to see most at hdfeos.org?

Send us your favorite IDL codes for NASA HDF at eoshelp@hdfgroup.org.

Acknowledgement