Pigeon
A Spatial MapReduce Language

http://spatialhadoop.cs.umn.edu/pigeon

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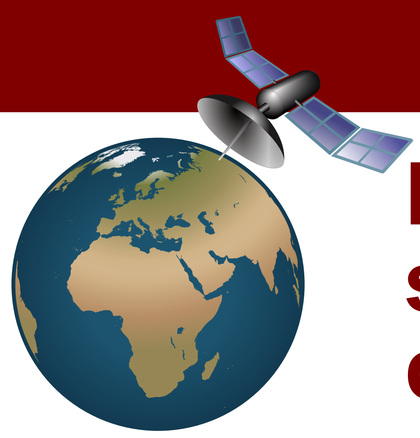
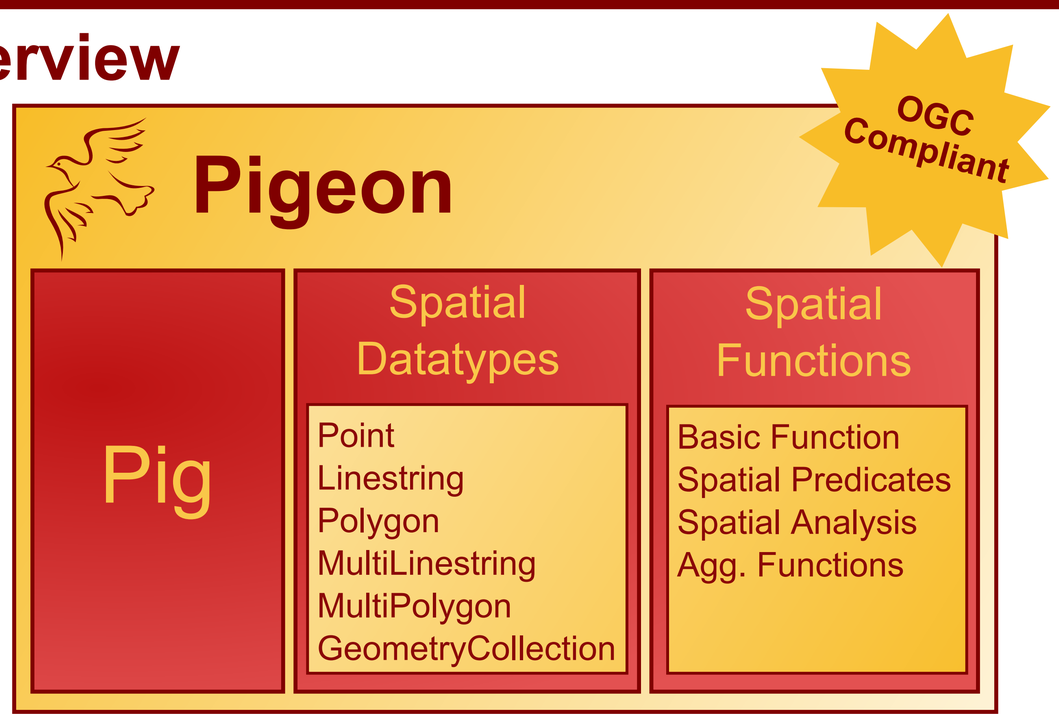


Big spatial data = Problem

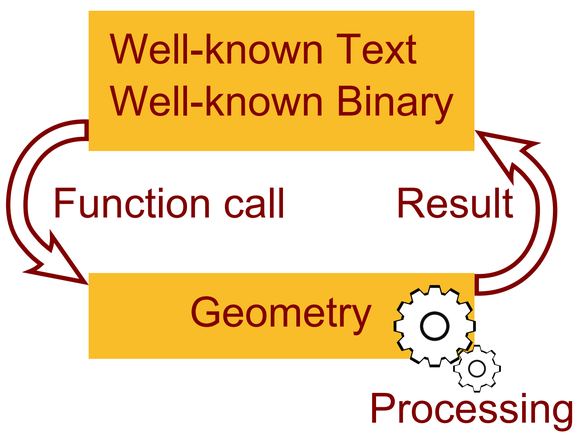
hadoop + Pig = Good for non-spatial data

hadoop + Pig + Pigeon = Solution

Overview



Data Types



Basic Functions

Retrieves basic information of a single object.
Examples
- Length
- Area
- MakePoint
- MakePolygon

Predicate

Tests a spatial predicate for one or two shapes
Examples
- IsClosed
- Interesects
- Touches
- IsEmpty

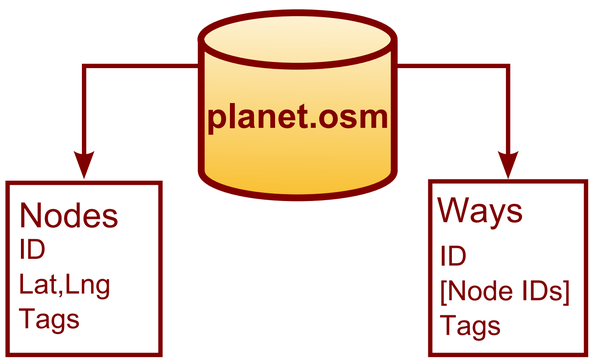
Analysis

Performs a spatial transformation of given object(s)
Examples
- Centroid
- Intersection
- Union

Aggregate

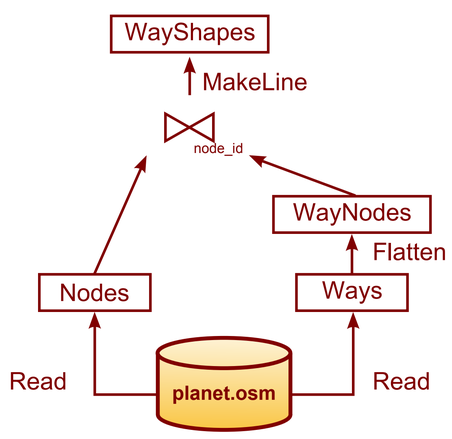
Computes a single value that summarizes a given set of shapes
Examples
- ConvexHull
- Envelope

OSM Dataset

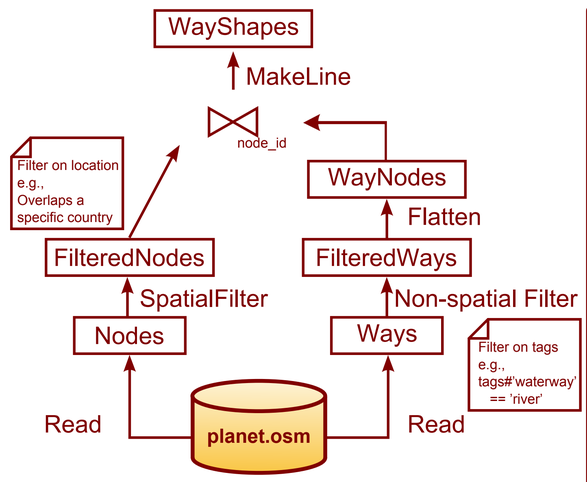


450 GB XML file
Updated Daily
Contains map data, e.g., road network, lakes, parks, country and city borders

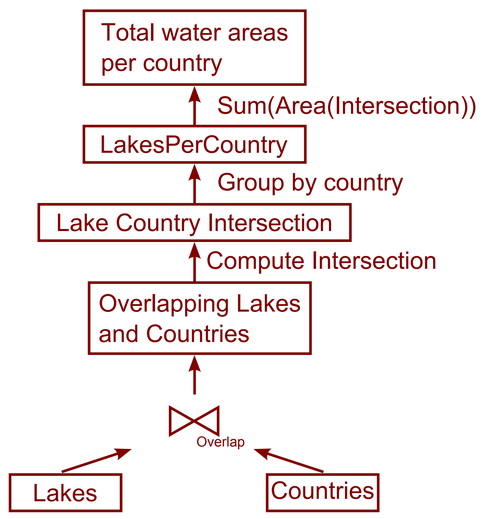
Show Cases



Planet Extraction



Filtered Extraction



Analysis

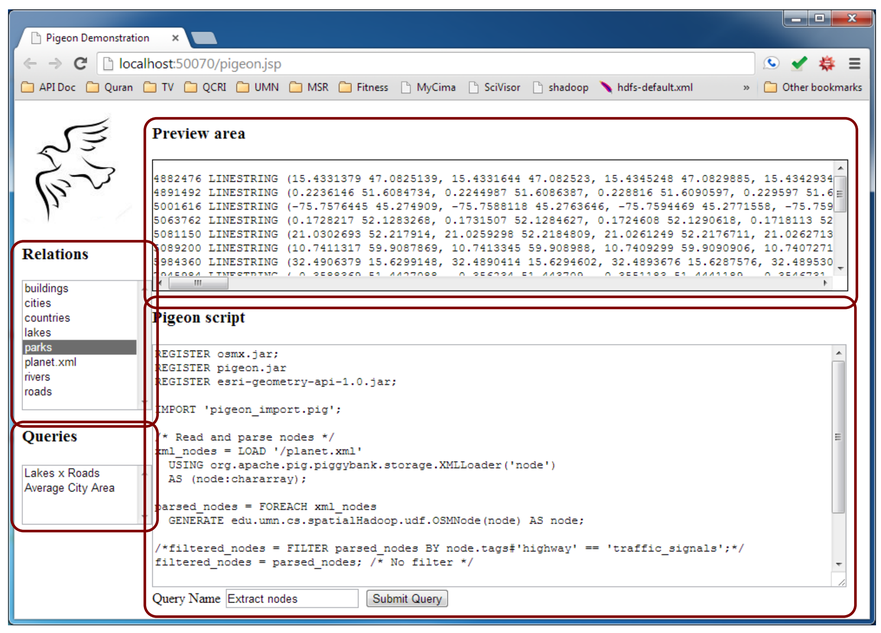
Visit us

Tap your NFC-enabled device here

OR

Scan this QR code

Running Scripts



Dataset Selector

Active Queries

Preview selected relation/
Show script progress

Write and execute a Pigeon script

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