

# GEOSPOCK SPATIAL BIG DATA PLATFORM

v2.1 Product Sheet

The GeoSpock Spatial Big Data Platform [GSBDP] is a database, visualisation and analytical platform specialising in geospatial, temporal and point of interest [POI] data analysis.

## KEY FEATURES

GSBDP provides the user with an extensive set of high-performance features enabling analysts and planners to rapidly undertake powerful and cost-effective geospatial queries.

- Run ANSI SQL queries using Data Analyzer by:
  - Creating an SQL query from Data Explorer
  - Executing a query from the GSBDP dashboard
  - Using Tableau to run SQL queries
- Optimized geometry functions and geotemporal queries in the Spatial Big Data Platform's Data Analyzer
- Data exploration and visualisation tool enabling investigation and analysis of multiple datasets to build insights with configurable layering and filtering of data, including visualising traffic or network flow using Data Explorer
- Core indexing and data storage engine supporting geospatial and temporal data
- Extensive data management dashboard for configuration and user administration
- Cloud-based within Amazon Web Services, deployed within customer or GeoSpock hosted environments



## KEY USE CASES

- Enabling the maritime industry with a way to visualize the emissions from shipping vessels, to comply with the up-coming regulatory changes for emission levels
- Providing Smart City/Smart Nation planners with tools to visualize the bidirectional flow of traffic through a road network
- Optimizing Data Analyzer geometry functions and temporal queries to enable quicker queries against a specific geographic region and a specific point in time or time range
- Providing SmartCity/Smart Nation planners with the ability to ingest, merge and correlate multiple datasets for analysis of traffic, planning, and population movement
- Using standard geospatial data processing to derive insights from multi-layers of information from mobile phones, for advertising and user behavioural analysis
- Optimising Assets and Logistics management using data from multiple sensors monitoring assets and goods to reduce waste and improve efficiency
- IoT data processing from single or multiple IoT devices over time providing key behavioural insights and enabling operators to optimise spectrum management

## FEATURES AND ENHANCEMENTS IN VERSION 2.1

- Exploration to analysis - Data Analyzer capabilities integrated with Data Explorer to provide a seamless user experience for running queries based upon a data visualization in Data Explorer
- Deployment process: Improved deployment process with deployable software now distributed as Docker container images
- Data ingestion: Improved ingestion stability and performance, providing metrics on the data ingestion process of the GSB DP
- Authorisation and authentication – user-based security, including role-based access controls and secure user account management
- SQL Query Engine – ANSI SQL support, command-line interface and support for BI tools such as Tableau. Distributed sort, cost-based and single radius query optimisation, providing low cost of ownership and speed of response performance
- Data Explorer Designer – the data view presentation and configuration options have been enhanced, including continuous numeric data range selection, fixed location data layer and layer property visualisation enhancements (show/ hide, reorder, add to an existing view, edit and list saved data views) – configured at time of deployment by GeoSpock
- Data Explorer Interaction – existing visualisation modes for data property correlation, selection and filtering are enhanced with the ability to work with geometry (polygons and lines), colour by value, and group by fixed location sensor readings
- Data Exploration Insights – the platform provides the user with the ability to share data visualisations, saving and sharing of specific cards and views via PDF, as well as creating galleries of snapshots for sharing with other use

## PRODUCT DETAILS

<b>Database model</b>	Hybrid NoSQL/SQL	<b>Deployment model</b>	Cloud-based (AWS)
<b>Data Management</b>	Initial ingest and incremental / streaming append	<b>Query Interface</b>	SQL via Presto; built-in data visualisation engine
<b>Data architecture</b>	Hybrid row/column store	<b>Transactions</b>	No
<b>Key / Value storage</b>	Hybrid	<b>In-memory operation</b>	No
<b>Index types</b>	Geospatial, temporal, categorical, events, points of interest (PoI)	<b>Performance</b>	Sub-second response with estimation refinement over time; high-speed full query
<b>Indexing</b>	Automatic pre-indexing during ingestion	<b>Data density</b>	Trillions of rows

For more information, or to see a demonstration please contact [sales@geospock.com](mailto:sales@geospock.com), or visit [www.geospock.com](http://www.geospock.com)



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