ORACLE SPATIAL AND GRAPH

Oracle provides the industry’s leading spatial database management platform. Oracle Spatial and Graph option includes advanced features for spatial data and analysis as well as for physical, network and social graph applications. The geospatial data features support complex Geographic Information Systems (GIS) applications, enterprise applications and location-based services applications. The graph features include a network data model (NDM) graph to model and analyze link-node graphs to represent physical and logical networks used in industries such as transportation and utilities. In addition, Oracle Spatial and Graph includes support for RDF semantic graphs used in social networks and social interactions.

Easily Location-Enable All Your Enterprise Applications and Processes

Most business information has a location component, such as customer addresses, sales territories and physical assets. Businesses can take advantage of their geographic information by incorporating location analysis and intelligence into their information systems. This allows organizations to make better decisions and respond to customers more effectively and reduce operational costs – increasing ROI and creating competitive advantage.

Oracle Database 11g includes native location capabilities and is a foundation for deploying enterprise-wide spatial information systems and location enabled e-business applications. Developers can extend existing Oracle-based tools and applications, since they can easily incorporate location information directly in their applications and services. This is possible because location data is fully integrated in the Oracle server itself.

Advanced Features for Spatial Analysis and Graph Applications

Spatial Features

The geospatial data features of Oracle Spatial and Graph option support complex geographic information systems (GIS) applications, enterprise applications and location-based services applications. Oracle Spatial and Graph option extends Oracle Locator spatial query and analysis features included in every edition of Oracle Database and provides a robust foundation for applications that require advanced spatial analysis and processing in the Oracle Database. It supports all major spatial data types and models, addressing the challenging business-critical requirements from various industries, including transportation, utilities, energy, public sector, defense and commercial location intelligence. These advanced spatial features include

- Over 400 spatial functions including centroids and aggregate functions.
- GeoRaster data type that natively manages georeferenced raster imagery, such as satellite imagery and gridded data.
RELATED PRODUCTS

- Oracle Database 11g
- Oracle Fusion Middleware Mapviewer
- Oracle Business Intelligence Enterprise Edition (OBIEE)

- 3-D, point cloud and LIDAR data management and analysis
- Geocoding and routing engines
- A persistent topology data model and schema for land management applications.

Network Data Model Graph Features

The Network Data Model explicitly stores and maintains a persistent data model and network connectivity and provides network analysis capability such as shortest path, nearest neighbors, within cost and reachability. It loads partitioned networks into memory on demand, which overcomes the limitations of in-memory analysis. By partitioning large networks into manageable sub-networks, users can easily analyze the network. The Network Data Model Graph features include:

- Ability to model and analyze link-node graphs to represent physical and logical networks used in transportation, utilities, energy and communications.
- Java APIs to perform analysis in memory
- Explicit storage and connectivity of the graph with link and node-level attributes
- Support for directed and undirected graphs with or without costs

Features for Semantic Database Management

Oracle Spatial and Graph includes advanced semantic data management capabilities, with native support for standards from the World Wide Web Consortium. RDF Semantic graphs are designed to be used in social networks and social interactions to address requirements from the research, health sciences, finance, media and intelligence communities. The RDF Semantic Graph features include:

- Indexing, querying and ontology management
- Graph relationships represented as triples in compressed, partitioned tables.
- RDFS, OWL and user-defined inferencing (parallel, batch and incremental)

The World’s Leading IT Platform for Spatial and Graph Data

Oracle Spatial and Graph is a native part of Oracle Database, the world’s leading information technology platform. Spatial and graph data benefit from Oracle’s leading performance, scalability and security, including the extreme performance of Oracle Exadata Database Machine. Only Oracle delivers spatial and graph features required by the most demanding, mission critical enterprise systems.

Contact Us

For more information about Oracle Spatial and Graph, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.