

- **Network Data Modelling tools** for Oracle Network Data Model (requires Spatial option) or custom network data schemas.
- **Temporal** provides a method to view and capture multiple versions of data over time.
- **Metadata** entry, viewing, and searching to easily find useful spatial data sets. Administrators may define metadata profiles corresponding to metadata standards such as ISO 19115 and ISO 15836 ("Dublin Core"), FGDC, GEMINI / eGMS, and custom profiles.
- **Web-based Administration** provides easy-to-use web set-up of spatial data from Oracle and geospatial web services, including definition of Maps, Styling and Metadata.
- **Role Based Access Control** for data sets, maps, print templates, and functions.
- **Standards-based security** including access control to data and functions by user-role, and LDAP / Active Directory support.
- **Auditing** of user changes, including both data and configuration.

Integration Capabilities include:

- **OGC Standard Web services** (WMS, WFS / WFS-T, GML) and ability to connect to WMS services.
- **Configurable Web URL links** to & from iSMART.
- **Import of GIS files** including Shape, TAB, DGN, GML3 .
- **Import of CSV data** with addresses (automatically geocoded).
- **Export** to formats including shp, gml, kml, jpeg, png, tiff, bmp, gif, svg; Export to **Excel** information for selected features. Export selected features to external applications.
- **Oracle MapViewer** can be used for map rendering

Data Sources

The native data store for iSMART is Oracle Spatial (or Locator). iSMART supports very large, global scale Oracle databases and can access multiple database servers.

Spatial data sources supported by iSMART include:

- **Vector** (SDO) – including lines, polygons, points (symbols), and multi-points/lines/polygons
- Oracle **Geocode** and Custom Geocoders
- Oracle and Custom **Network Data Models**
- Oracle **Georaster** (requires Spatial option)
- Geo-referenced **imagery** for Oracle Locator
- **Background maps** from Google Maps Open Street Maps, DigitalGlobe Imagery

- **Support for 'Tiled' base map** images increases performance of map viewing.
- **Direct access to GIS files** including TAB, MrSID, GeoTiff.
- **Import and geo-rectification** ('rubber-sheeting') of image files.
- **Live data feeds** such as GPS tracking.
- **Custom data sources.**

Software Requirements

User Interface

- **Recommended Web Browsers:** Internet Explorer 9+ Firefox 32+, Chrome 45+

Database Server

- **Oracle 12c, 11g (R2) or 10g (R2)**
May use Oracle Locator or the Spatial option (required for some functionality).

Application Server

- **Fully Supported Enterprise Java Application Servers:**
Apache Tomcat 6.0/7.0 (with Java 1.6/1.7)
Oracle WebLogic '11g' 10.3 (with Java 1.6) and '12c' 12.1.0.2 (with Java 1.8)
- **Fully Supported Operating Systems:**
Linux Red Hat (64 bit) and derivatives, Windows Server 2008/2012 (64 bit), Solaris 10 (SPARC), Windows 7.

Hardware Requirements

Hardware requirements depend on expected user numbers, data sizes, usage patterns etc. iSMART is typically deployed with separate application and database servers. Multiple application servers and front-end web servers may be used for scalability and fail-over.

A typical application server would have a 4 core (2.5 GHz, hyper-threading) 64-bit CPU, 7-12 GB RAM, 200 GB Disk.

A typical database server would also have a RAID 5 disk array with >500 GB capacity.

