faq

ORACLE FUSION MIDDLEWARE

Oracle Application Server 10*g* MapViewer

Frequently Asked Questions

September 1, 2005

This FAQ addresses frequently asked questions relating to availability, certification, and key messages of MapViewer in Oracle Application Server 10*g*.

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1.0 Overview

1.1 What is MapViewer?

MapViewer is a Java-based visualization tool that is used to render, in map form, location based content and spatial data stored using the spatial feature of the Oracle9i and 10g database server. MapViewer can be used to:

- Create customized maps that show geographic features such as roads, city areas, waterways and other transportation networks.
- Display map themes such as national, state and local boundaries.
- Visualize business data (e.g. population demographics, psychodemographics, sales metrics, etc.), to portray and explore relationships that can often best be expressed graphically as geographic maps.
- Complement an applications workflow, providing interaction with mapped data.

Deliver custom maps over the Internet as a component of JDeveloper or as a standalone tool.

1.2 How is MapViewer positioned in Oracle Application Server 10g?

Application Server 10g MapViewer is one of the J2EE components available with the JDeveloper, J2EE, WebServices, and Internet bundle of the Application Server.

1.3 Why was MapViewer developed?

MapViewer was developed to simplify the development of applications that render and present location data as part of internet and wireless business applications. It is currently used by Oracle11i eBusiness Suite applications, Oracle Application Server 10g wireless, as well as in numerous customer applications

1.4 What functionality does MapViewer deliver to developers?

MapViewer provides an XML request/response vocabulary, Java Client API, and JSP Tag Libraries to enable application developers to embed map-rendering capability directly into existing e-business applications. Support for session control and basic viewing functions (map legend, select theme to view, etc.) are provided via the JSP Tag Libraries. More control of the image and the application interaction wth the map is afforded through the Java Client API's that support map interaction such as pan, zoom, locate, re-center, etc. The XML map request API allows full control of MapViewer’s functionality.

1.5 What are the primary benefits of MapViewer?

MapViewer saves money by reducing development time via tight integration with the JDeveloper environment. MapViewer increases the value of location data in the Oracle database by providing a tightly coupled tool to visualize these data. MapViewer improves applications summarizing complex business and geographic data and relationships in an easily understood, universally recognized format - a map.

2.0 Packaging and Availability

2.1 How is MapViewer Licensed?

MapViewer is licensed as part of the Java Edition, Standard Edition, and Enterprise Edition of Oracle Application Server 10g, and with Oracle JDeveloper.

2.2 How is MapViewer Delivered?

MapViewer is delivered with the Application Server and is also available for download from OTN. MapViewer is picked up by all installs (e.g. BI, Wireless, Portal, etc.) except infrastructure.

2.3 Can I download MapViewer from Oracle.com?

MapViewer can be downloaded from its OTN web site:
http://www.oracle.com/technology/products/mapviewer/index.html

3.0 Features

3.1 What features does MapViewer provide?

MapViewer is a programmable tool for rendering simple maps using spatial data managed by Oracle Spatial and/or Oracle Locator. MapViewer includes components that perform cartographic rendering, and a map definition tool to manage map metadata and portrayal information.

3.2 How does MapViewer work?

MapViewer is a simple rendering engine that builds a JPEG or PNG format image for a user specified map defined in the Oracle dictionary. A user first defines a map by picking spatial layers (i.e. SDO_GEOMETRY column names) they would like to associate with a map. A user defines these maps by populating information into Oracle dictionary tables. The Oracle dictionary will also contain metadata associated with symbology, label, and style rules for spatial layers associated with a map. A set of configurable styles and symbols are populated in the Oracle dictionary when MapViewer is installed.

- Dynamic symbol and style definitions, along with SQL statements that return geometries can also be submitted together with a map display request. The geometries returned from the dynamic SQL statements are displayed on the rendered map and displayed in any browser.

3.3 What programming languages can the MapViewer API be called from?

The MapViewer XML API can be called from any programming language that can submit and receive XML to/from Oracle Application Server 10g (i.e. HTML forms, Java, C, OCI, Pro*C, PL/SQL, etc…). MapViewer in Oracle Application Server 10g will return an XML response that contains a URL to the map image, and additional metadata. MapViewer also provides a thin Java client API for interacting with the rendering engine through the HTTP protocol.

3.4 Can MapViewer be used independently of the Oracle Application Server?

MapViewer is licensed only with Oracle JDeveloper or with Oracle Application Server 10g. It requires Oracle Containers for Java (OC4J), JDBC, XML parsers and other Application Server 10g components. In addition, MapViewer applications can be deployed in any standard J2EE container provided the customer has sufficient licenses of the Oracle Application Server.

3.5 What new features does MapViewer have in the Oracle Application Server 10g release?

MapViewer has a broad set of new features in this release. Major new features are described in the sections that follow.

- **Support for Oracle Spatial 10g new features**
  MapViewer 10.1.2 supports the Spatial 10g GeoRaster type, and the Spatial 10g Topology and Network (NDM) data models. MapViewer can display imagery stored in GeoRaster, geometric networks created using NDM, and spatial features defined in the Topology data model. For more information see Sections 2.3.6, 2.3.7, and 2.3.8 of the MapViewer User’s Guide.

- **Workspace Manager Support**
  Workspace Manager is an Oracle Database feature that lets you version-enable one or more tables in the database. You can request a map from a specific workspace, at a specific savepoint in a workspace, or at a point close to a specific date in a workspace. You can also perform administrative requests related to Workspace Manager support. For more information, see Section 2.7 in the MapViewer User's Guide.

- **SVG Format Support**
  Maps can now be rendered into SVG format, which provides a richer user experience than a graphic image format. The format attribute of the <map_request> element accepts the SV_STREAM and SV_URL values, as explained in Section 3.2.1.1 in the MapViewer User's Guide.

- **JPEG and Transparent PNG support**
  MapViewer now supports indexed PNG maps with a transparent background and JPEG maps. For information about these image formats, see Section 3.2.1.1 in the MapViewer User's Guide.

- **Multiple Data Sources in a map Request**
  You can now generate a map based on dynamic or predefined themes that come from different data sources (databases). This capability is necessary for aggregating data from multiple data stores. See Section 3.2.10 in the MapViewer User's Guide.

- **Support for OGC Web Map Server 1.1.1 interface**
  MapViewer supports the rendering of data delivered using the Open Geospatial Consortium's (OGC) Web Map Service (WMS) protocol, specifically the WMS 1.1.1 implementation specification. MapViewer supports the GetMap, GetFeatureInfo, and GetCapabilities requests as defined in the OGC document 01-068r3. For information about the WMS interface, see Appendix D in the MapViewer User's Guide.

- **Dynamic Coordinate System Transformation in a Map Request**
  Users can now specify a SRID (spatial reference ID, or coordinate reference system ID) in a map request, and MapViewer will transform the theme data if it is not already in the specific SRID. This is described in Section 3.1.8 of the MapViewer User's Guide.

- **Performance and High Availability Improvement**
  The performance of MapViewer has been improved, particularly in querying and retrieving spatial data. You may also be able to improve performance further by customizing the spatial geometry data cache, as explained in Section 1.5.6 in the MapViewer User's Guide. MapViewer enables you to use the high availability features of Oracle Application Server more effectively than in previous releases. This is explained in Section 1.6 of the MapViewer User's Guide.

4.0 Positioning

4.1 Why did Oracle build MapViewer?

Oracle views location data as an integral component of the information infrastructure of any enterprise. Location data can be complex, and many of the important location relationships between business data need to be presented as a map to be understood and appreciated. MapViewer was created to support the enterprise requirement to support location information in the most effective way possible, by visualizing this information in mapped form.

5.0 Additional Information

5.1 Where can I get additional information about MapViewer?

In addition to this FAQ there is a Technical white paper and the MapViewer User's Guide referenced above. These are available from OTN. There is also an internal site (spatial.us.oracle.com) where demonstration applications, additional documentation and other information may be found.

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