

"A Scalable, Interoperable Platform for Managing Geo-Spatial Data on the Internet"

Overview

CubeSERV® Web Feature Server builds on the CubeSTOR® solution by providing a web based service for querying and performing transactional operations including database locking. This product has been built using the latest OpenGIS® Consortium (OGC) Specifications and the Geographic Mark-Up Language (GML).

In recent years, OGC standards have gone from the back rooms of corporate GIS centers to the front lines of new global information infrastructures. Industry and government are now demanding that new systems be fully compliant to any relevant OGC specifications. This insulates them from the weaknesses of single-vendor solutions and guarantees interoperability.

While early standards efforts concentrated on sharing maps, or pictorial representations of data, the second wave of innovation opened up by OGC standards involves the direct sharing and editing of data. The



Web Feature Service (WFS) specification was created for this purpose. As the editor of the WFS specification document, CubeWerx is uniquely placed to guide and support this standard as it evolves. As a result, our Web Feature Server is the most performant, robust and secure WFS on the market today.



What is a Web Feature Server?

Simply put, a Web Feature Server allows a user to remotely access and edit geo-spatial data. Unlike a WMS which serves maps, a query to a WFS returns actual data, i.e. a mathematical representation of geographic features, along with their associated attributes.

The simplest analogy to the Web Feature Server is the relational database. Databases allow us to request a catalog of the information available, then perform operations on this information, such as Query, Describe, Update, Delete, etc. A WFS supports a similar set of operations for geo-spatial data.

XML is the transport mechanism for making requests to a WFS and for encoding the results. All WFSs support the GetCapabilities operation, which returns an XML-encoded document describing the data served. Other operations include a schema request (DescribeFeatureType), query (GetFeature), and optionally, a set of editing transactions (Insert, Update, Delete and Lock). CubeWerx WFS supports all this and more.

Key Benefits

- Supports Service Oriented Architectures (SOA) by shifting data management from the back room to the Web Service level.
- Allows remote editing of source data, eliminating costly errors arising from multiple levels of data management.
- Eliminates proprietary interfaces, thereby reducing project risks associated with single-vendor solutions.

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Key Features

- Fully supports the OGC-WFS specification, version 1.0 (GML 2.1.2) and version 1.1 (GML 3.1.1)
- Can cascade other OGC compliant Web Feature Servers to create an integrated view of multiple data sources (Available Q1, 2009)
- Fully supports the transactional extension to the WFS specification, including INSERT, UPDATE, DELETE and LOCK operations
- Integrated with CubeWerx® Identity Management Server (IMS), to provide fine grained data security and access control
- Allows "schema mapping" to dynamically present a different data schema to the client than the one defined in the database, including mapping of column names and data types
- Can optionally serve data in GeoRSS format to be presented directly in Google™ Maps, or KML format, for use in Google™ Earth
- Support for SSL authentication of server and X.509 certificate management
- Supports hundreds of spatial reference systems profiled under EPSG projections and datums and allows users to define custom projections
- Contains a built-in server load

balancing facility

- Can apply XSLT style sheets to automatically transform response documents as desired by the client
- Supports Create Table and Drop Table operations to manage remote datastores (Available Q1, 2009)
- Automatic "gzip" compression of response documents if requested by the client, eliminating bulky XML overhead



Software Specifications - CubeSERV® Web Feature Server

Operating system requirements:

SUN Solaris, Linux (Red Hat ES or Fedora Core or SUSE)

Other software requirements

Oracle 8i, 9i, 10g or 11g is required, as is a Web Server, such as Apache or IIS.

CubeSTOR® Spatial Database is also required

Supported output formats:
GML3, GML2, BXFS, KML, Shape, MID/MIF, GeoJSON, GeoRSS, ATOM

SSL and x509 certificate authentication is supported but optional.



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