

Carmenta Server

A complete solution for cost-effectively visualizing and distributing GIS data through web services

Carmenta Server is Carmenta's geospatial technology customized for use in service-oriented architectures on Windows Server. It offers robust, cost-effective technology for building and maintaining highly scalable web-based geospatial applications.

- Native support for a wide range of data formats.
- Optimized for handling dynamic data.
- High performance and reliability.
- Easy set-up and administration.
- Compliant with OGC standards.

With the strength of Carmenta Engine as its core map engine, Carmenta Server utilizes the full power of Carmenta's robust software technology. Based on a common set of battle-proven components and already deployed in a wide range of customer applications, it can be relied upon as the backend of any demanding 24/7/365 web-based system.

Carmenta Server has demonstrated outstanding performance and reliability in operational deployments, and handles all map and sensor data, together with all other types of 2D and 3D geospatial information.

Given the very high performance figures and its ability to handle high loads, Carmenta Server enables mission-critical web-based applications to be deployed in environments requiring less hardware than the competition, and with higher utilization of system resources, without compromising on capacity or availability. It fully supports the deployment of web-based services in virtual and cloud environments.

System integrators and software developers can benefit from Carmenta Server's adaptability and small footprint, as it can be easily integrated into any new or existing system architecture. Not to mention its hassle-free setup, user-friendly web-based administration and flexible licensing system. With Carmenta Server's Software Development Kit (SDK), customers can develop, test and integrate online map services in a cost-effective manner.

All Carmenta products use the same map configuration settings, which promote the re-use and sharing of maps within and between organizations. Furthermore, all maps used in a Carmenta Engine-based application can easily be published



as geospatial web services through Carmenta Server. A number of geoprocessing and terrain analysis functions are also available in Carmenta Server, including line-of-sight, slope/aspect and vertical clearance analyses.

Carmenta is an Associate member of OGC, the Open Geospatial Consortium, Inc. Using only standardized and open web interfaces, Carmenta Server is the perfect backend for any kind of web-based environment that handles geospatial data.

Carmenta Server comes bundled with a JavaScript web client based on popular open source components, including OpenLayers for 2D maps and Cesium for 3D.

KEY FEATURES

- Native reading of GIS data from more than 70 GIS file formats and spatial databases.
- Powerful processing of geospatial data on the fly, such as Slope and Line-of-Sight calculations.
- Combines and analyzes data from multiple sources simultaneously.
- Full integration of sensor data and dynamic object information in all services.
- On-the-fly transformation of customer-specific data models to external standards.
- Geodata catalogs for keeping track of datasets and services with automatic updates.
- Comes bundled with Carmenta Web Explorer, a feature-rich web client based on OpenLayers and Cesium, for advanced 2D and 3D maps.
- Ready-to-use geospatial portal components.
- Efficient tools for creating, editing, storing and publishing metadata.
- Built-in map tile cache with tools to pre-populate the cache in runtime.
- Built-in proxy server for cascading data from external services.
- Full control over server administration from a single web page.
- Scriptable map service administration and a built-in overview web page for published map services.
- Powerful REST API for managing settings, map services, etc.
- Optimized for multi-core processors on 64-bit Windows Server.
- Highly scalable internally with support for multiple map server instances on a single server.
- Adapted for deployment in virtual and cloud environments.

RELIABILITY AND SECURITY

- Services can be added and removed dynamically, without restart.
- Login with ticket/cookie-based or challenge-based sessions (NTLM, etc.).
- Security controlled by setting access restrictions on services and layers.
- Integrated monitoring of server usage with live graph presentation in runtime.
- Automatic notification of errors and restart of services.
- Flexible connection to external authentication servers.

- Holds the following OGC certificates:



- Supports other OGC standards such as: GML 3.2.1, WCS 1.1.2, WMC 1.0.0 and more.
- Transactional WFS (WFS-T) for creating, deleting and updating features on the server.
- Feature Portrayal Service (FPS) for rendering features from WFS servers.
- Automatic GML generation from multiple vector data sources on the fly.
- Advanced download service based on WFS including on-the-fly Shapefile generation.
- Support for Styled Layer Descriptor/Symbol Encoding (SLD/SE) for setting map portrayal.
- Supports tiled vector data following the Mapbox Vector Tiles (MVT) specification, for high performance vector maps.
- Supports web-based 3D with Cesium 3D Tiles and Terrain services.

ABOUT CARMENTA GEOSPATIAL TECHNOLOGIES

With 35+ years of mission-critical experience and a strong global customer base, we make it possible to rapidly create and deploy state-of-the-art 2D/3D geospatial applications, with powerful developer tools and support systems.



For further information, please contact us:
info@carmenta.com
carmenta.com