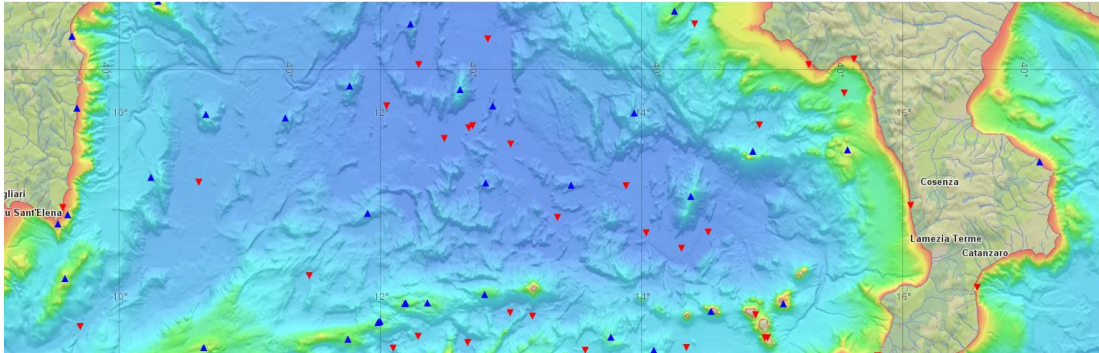


What's New in Carmenta Server Core 2019.1

The Web Map Server for Docker Containers

Carmenta Server Core 2019.1 is the new version of Carmenta's successful web map server for Docker containers. It adds new functionality to the previous version, Carmenta Server Core 2019.0, which was released in the first half of 2019.



Improved SDK Installation

The SDK installation is now packaged and downloaded as a single executable installation application (Windows) or run file (Linux). The installer will install the complete SDK package content:

- Carmenta Studio and Carmenta Explorer map configuration development tools
- Carmenta Server Core service samples with sample geodata
- Carmenta Server Core SDK documentation

Together with one or more Carmenta Server Core 2019.1 Docker images which are downloaded separately, this comprise the complete SDK environment for developing and testing web map services on a developer PC.

Simplified License Handling

The Carmenta Server Core license handling has been simplified in the new release.

For development, a single SDK license file will be used for installation of the map configuration tools, and for running containers to test the map services on a local Docker Desktop installation. The license file will contain the SDK license key (Windows or Linux), together with two runtime license keys for Windows- and Linux-based Carmenta Server Core containers.

For deployment, a single Production license file will contain runtime license keys for both Windows- and Linux-based Carmenta Server Core containers. Deployment may be made using either or both base image types in parallel.

Support for XYZ / Slippy Maps Services

With Carmenta Server Core 2019.1, support is added for yet another tile based web map service. In addition to the already supported OGC interfaces WMTS (Web Map Tiled Service) and WMS-C (Web Map Service Tile Caching) for raster map tiles, as well as the tiled vector map interface Vector Tiles, Carmenta Server Core now supports XYZ-compatible links (known as OSM Slippy Maps).

The XYZ-compatible links allow simpler retrieval of raster map tiles, with no need for Capabilities document being fetched and parsed, and where parameters such as reference system, scale levels etc. are fixed. The XYZ / Slippy Maps interface is compatible with for instance the OpenLayers OSM (Open Street Map) layer or the Carmenta Engine OgcWmtsLayer using a simple template tile URL.

Improved 3D Tiles Performance

The Cesium 3D Tiles service that was introduced in Carmenta Server core 2019.0 has undergone an overhaul to significantly improve its performance. For 3D Tiles based on 3D objects such as building polygons or more general objects, the performance is improved up to ten times compared to before. When used for detailed 3D Models based on Collada data or similar, the performance is improved up to four times compared to before.

Kubernetes Resource Metrics

Carmenta Server Core 2019.0 introduced a couple of Kubernetes probes to monitor the container state (readiness and liveness probes). The new version in addition contains support for Prometheus-compatible resource usage metrics, to monitor services and resource statistics. The monitoring can be used with Prometheus and Grafana dashboards for instance.

Service List JSON

To retrieve a view of the published map services in a Carmenta Server Core map container, a number of interfaces are available. Previously an OGC WMC service could be called per map service to retrieve overview information of the services different endpoints and metadata. In addition, a non-standard WMC service was published that allowed a client to retrieve a simplified view of all services in the map container.

With Carmenta Server Core 2019.1 this simplified view now supports retrieval as a JSON document, to allow easier creation of objects in a client application. In addition, the JSON document now contains all metadata necessary for instantiating map layers for most service types, without the need to retrieve additional Capabilities documents in most cases.

Miscellaneous Improvements

The following additional improvements have been made in Carmenta Sever Core 2019.1:

- Updated Carmenta Engine runtime, to latest version 5.13
- Updated Windows base image, from Windows Server version 1809 to Windows Server Core 2019 LTSC
- Support for SQL Server Integrated Security connection strings
- Support for reading XYZ/Slippy Map services, when Carmenta Server Core acts as a proxy server for remote services
- Open JDK is now included and installed with the SDK, removing the requirement for a separate Java Runtime Environment

- Significant performance improvements to TerrainRouteOperator and TerrainAccessOperator for analysis of terrain routes and access based on terrain etc.
- Extended functionality for TerrainRouteOperator and TerrainAccessOperator to cover more analysis scenarios
- New RidgeOperator to analyse elevation data for ridges, valleys and peaks
- Improved Linux and Windows path and file name compatibility