

What's new in Carmenta Server 4.2

A complete solution for cost-effective visualisation and distribution of GIS data through web services

Carmenta Server provides cost-effective technology for building large-scale network-based geospatial solutions. It simplifies the distribution and exchange of geographic data using standardised and open web server interfaces.

With the latest 4.2 minor release of Carmenta Server, it is now even easier to publish your GIS data as a chosen OGC compliant web service and it has several new and integrated tools for working with metadata and setting up Geodata catalogues. Carmenta Server's celebrated reliability in production environments has been further improved by introducing a brand new framework for monitoring the performance of services in runtime.

The latest release includes new features and extended functionality in the following areas:

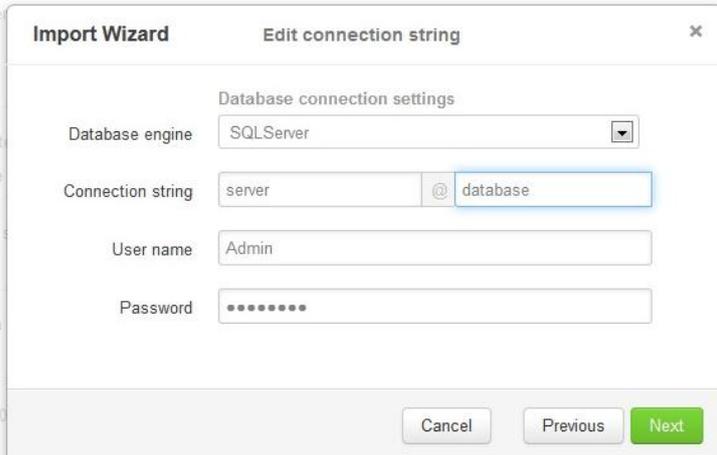
- Easy publication of Geodata as OGC services
- Use of OGC services for downloading data
- Increased reliability with integrated monitoring tools
- Improved support for standardized Catalogue Services
- Keep track of Geodata with a new geospatial portal client
- Fast and easy label deconfliction
- Productivity improvements for map designers
- Many other improvements and minor extensions

Easy publication of geodata as OGC services

The transition process, from using GIS data in a desktop environment to publishing data as a web-based service, can be cumbersome and involve many different stages. With Carmenta Server 4.2, a number of improvements have been added to significantly reduce the amount of time and effort spent making Geodata visible through OGC services. These include:

- An online wizard tool guides the user comfortably through the publishing process

Image 1. With the new import wizard it is easy to publish geodata stored in databases as a WFS.



The screenshot shows a dialog box titled "Import Wizard" with a sub-header "Edit connection string". It contains the following fields:

- Database engine:** A dropdown menu with "SQLServer" selected.
- Connection string:** A text input field containing "server" followed by an "@" symbol and "database".
- User name:** A text input field containing "Admin".
- Password:** A text input field with masked characters (dots).

At the bottom of the dialog, there are three buttons: "Cancel", "Previous", and "Next".

- Comprehensive support for connecting to geospatial databases and publishing content through WFS
- Create “cascading” solutions easily by connecting to external OGC services and re-publishing through your own server

Using OGC services for downloading geodata

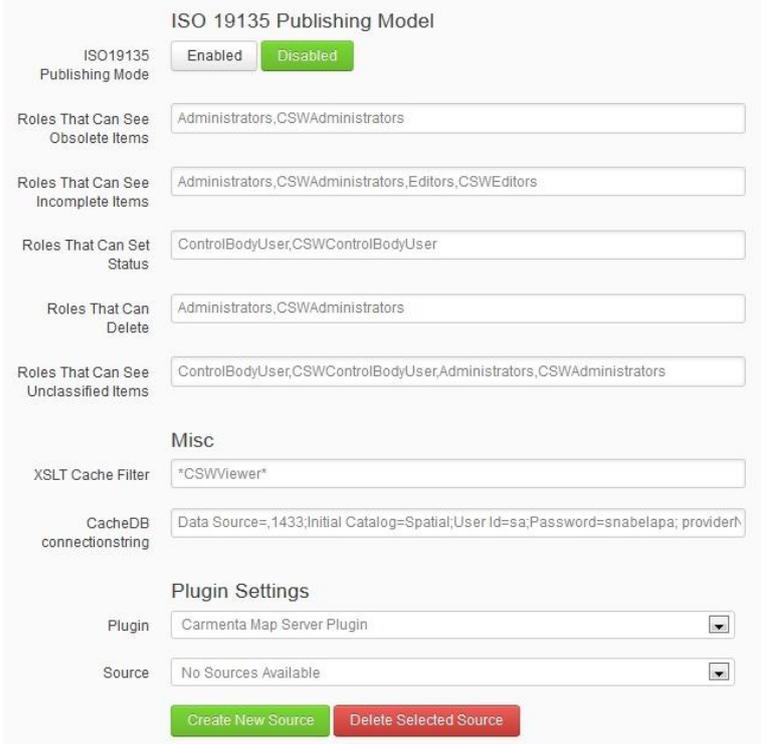
We have extended Carmenta Server’s tools for the setting up and running of highly efficient online download services. With the new version, you can now manage very efficient download services. An innovative automatic data transformation model will save a lot of effort, otherwise spent on time-consuming off-line processing work. Carmenta Server 4.2’s new features and improvements to the download service can be summarized as follows:

- Full support for downloading feature data according to INSPIRE requirements and guidelines.. The support includes both setting up ‘Direct Access’ solutions and downloading pre-defined datasets or pre-defined parts of datasets
- On-the-fly data model transformation from internal models to data schemes mandated by external organisations, such as INSPIRE
- Support for ‘Stored Queries’ to improve efficiency when retrieving feature data from databases

Improved support for standardised Catalogue Services

Carmenta Server 4.2 comes with a complete solution for gathering, searching for, updating and publishing information about GIS data and metadata. Further improvements to the already certified OGC CSW 2.0.2 solutions mean that users can now search through resources and find useful services or datasets for additional uses. The new features of the updated Catalogue and metadata solution in the latest version can be summarised as follows:

- Faster metadata searches in harvested metadata records
- More search options
- Improved support for INSPIRE requirements, such as multiple languages
- Administration of the Catalogue service is now fully integrated with Carmenta Server’s easy-to-use administration tools.



ISO 19135 Publishing Model

ISO19135 Publishing Mode:

Roles That Can See Obsolete Items: Administrators,CSWAdministrators

Roles That Can See Incomplete Items: Administrators,CSWAdministrators,Editors,CSWEditors

Roles That Can Set Status: ControlBodyUser,CSWControlBodyUser

Roles That Can Delete: Administrators,CSWAdministrators

Roles That Can See Unclassified Items: ControlBodyUser,CSWControlBodyUser,Administrators,CSWAdministrators

Misc

XSLT Cache Filter: *CSWViewer*

CacheDB connectionstring: Data Source=,1433;Initial Catalog=Spatial;User Id=sa;Password=snabelapa; providerN

Plugin Settings

Plugin: Carmenta Map Server Plugin

Source: No Sources Available

Image 2. With the new catalogue server administration tool it is easy to control metadata publishing, cache and plug-in settings, etc.

- The tools for monitoring the harvesting process are now part of the administration tools
- New client tools for managing metadata and keeping track of services have been added (see geospatial portal client below)

Keep track of geodata with the new geospatial portal client

A ready-to-use geospatial portal client is now part of the Carmenta Server. It is based on pure JavaScript and HTML graphical interface components for searching and browsing available services, datasets and other downloadable information. The portal client's main features:

- Advanced tool for listing and filtering metadata records
- Includes tools that enable free text searches, category filters, spatial filters or a combination of these.
- An interactive preview of connected OGC services is available for investigating the appearance and quality of the data.
- Includes an easy-to-use metadata editor for adding new metadata records and updating existing ones. The editor supports various metadata profiles, such as the one for INSPIRE, and has built-in content validation.
- The Access to metadata for editing purposes is controlled by Carmenta Server's security framework. Various different user roles can be defined to support a workflow model when managing an organisation's proprietary metadata content.

Home About Search Not logged in Language

Search For: Vatten Sort By: Title Ascending Search

Category filters Type: Service Service type: View OGC Standard: Web Map Service Reset

Spatial filter None Reset

Options Prev Showing Records 1 - 10 / 35 Next

Antal dygn med åska per år, medelvärde 1961-1990 - Visningstjänst	Last modified 2012-04-02
Biogeokemi, koppar (visningstjänst)	Last modified 2012-03-29
Biotopskyddsområden beslutade av Skogsstyrelsen	Last modified 2012-05-21
Brunnar (visningstjänst)	Last modified 2012-03-29
Geofysiska flygmätningar, magnetfält (visningstjänst)	Last modified 2012-03-29
Geofysiska markmätningar, tyngdkraft (visningstjänst)	Last modified 2012-04-04
Globalstrålning, 1961-1990 - Visningstjänst	Last modified 2012-04-03
Grundvatten 1:1 miljon (visningstjänst)	Last modified 2012-03-29
Göteborgs översiktsplan - Användning av mark- och vattenområden	Last modified -
Huvud- och delavrinningsområden, vattendelare (SVAR2008) - visningstjänst	Last modified 2012-04-02

Image 3. The new geospatial portal client provides a clear and concise presentation of search results.

Home About Search Edit Administrator Language

Search For: Vatten Sort By: Title Ascending Search

Category filters Type: Service Service type: View OGC Standard: Web Map Service Reset

Spatial filter None Reset

Options Prev Showing Records 1 - 10 / 35 Next

Antal dygn med åska per år, medelvärde 1961-1990 - Visningstjänst	Last modified 2012-04-02
<ul style="list-style-type: none"> Show distribution links View detailed record information View record as xml Edit metadata for this record Delete record 	
Biopskyddsområden beslutade av Skogsstyrelsen	Last modified 2012-05-21

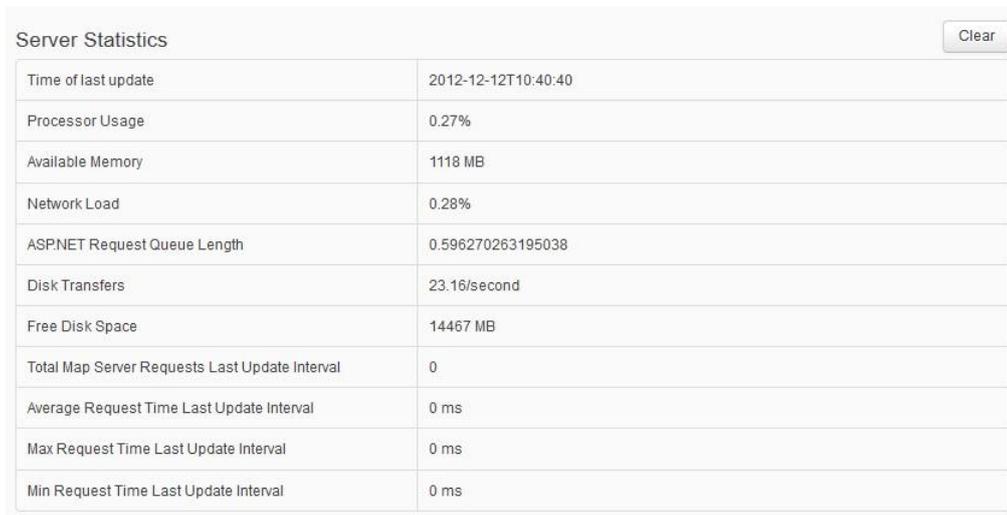
WMS-tjänst som visar biotopskydd på skogsmark. Det är vanligt att livsmiljöer som har stor betydelse för växt- och djurarter bara påträffas som små spridda öar i ett mer allmogligt landskap. I den svenska lagstiftningen finns en möjlighet att avsätta sådana områden som så kallade biotopskyddsområden. Skogsstyrelsen ansvarar för detta områdesskydd om biotoperna ligger på skogsmark, på annan mark är länsstyrelserna ansvarig. De områden som kan få denna status är, enligt lagtexten, "mindre mark- eller vattenområden som utgör livsmiljö för hotade djur- eller växtarter eller som annars är särskilt skyddsvärda". Syftet med att skapa biotopskyddsområden är alltså enligt lagtexten förhållandevis entydigt de biologiska värdena. Det är vanligt att storleken på områdena som skyddas är 2-10 hektar men de kan vara upp till cirka 20 hektar stora. Rätten att färdas och vistas kan regleras i områdena, men i övrigt formuleras inga föreskrifter eller förbud för varje särskilt område. Det finns i stället en allmän regel från lagtexten, som säger att det i områdena inte får bedrivas verksamhet eller vidtas åtgärder som kan skada naturmiljön.

Image 4. It is easy to launch the built-in metadata editor for each metadata record in the list. Editing is permitted here as the user is logged in as an Administrator with full access. Note also that the list view is expanded, showing the 'Abstract' field for each record.

Further improved reliability with integrated monitoring tool

Carmenta Server is already an extremely reliable web map server solution, used in many 24/7 production environments. With the latest minor upgrade, Carmenta is taking reliability to new levels by introducing an advanced runtime-monitoring framework. With this tool, it is now possible to supervise a server installation and monitor its performance at every stage. The framework can also be used to monitor usage, for the purpose of charging fees based on the number of transactions, data volumes etc. The monitoring framework offers the following new features:

- Automatic monitoring of various system performance characteristics with configurable alarm levels
- Measures and presents map server performance figures, number of transactions, data volumes, etc.



Server Statistics		Clear
Time of last update	2012-12-12T10:40:40	
Processor Usage	0.27%	
Available Memory	1118 MB	
Network Load	0.28%	
ASP.NET Request Queue Length	0.596270263195038	
Disk Transfers	23.16/second	
Free Disk Space	14467 MB	
Total Map Server Requests Last Update Interval	0	
Average Request Time Last Update Interval	0 ms	
Max Request Time Last Update Interval	0 ms	
Min Request Time Last Update Interval	0 ms	

Image 5. Server performance figures are clearly presented in real time.

- Allows information to be gathered for statistical analysis, e-business charging, etc.
- Information collection on per-service and per-user basis.
- Surveillance of user logins.

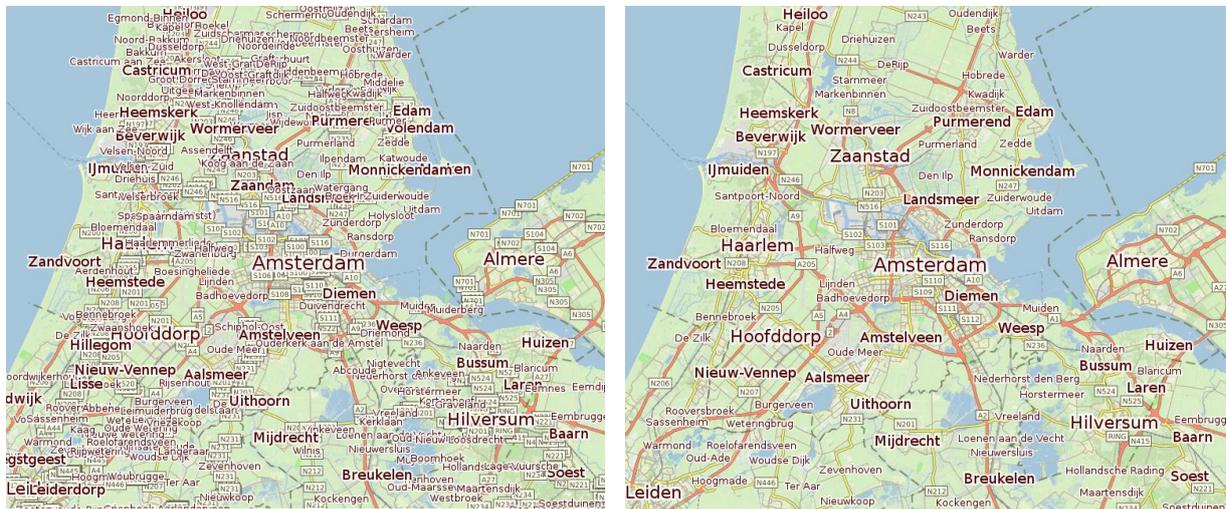
Fast and easy label deconfliction

A major problem in map making is being able to place labels well, usually with the difficult goal of placing as many labels as possible without overlap. With Carmenta Server 4.2, the label and symbol organizing functionality has been given a complete makeover. The new, improved LabelOrganizingLayer is now much easier to start using, produces better results, is faster and has several useful new features.

- Quick and straightforward to set up. The default settings work for most maps.
- Labels can have different priorities, which depend on feature attributes. For instance, labels for larger cities are given higher priority than smaller cities, or an aircraft label can be given higher priority than the labels of the waypoints it passes.
- Labels are repositioned or removed to avoid overlap with other labels.
- Duplicate labels can be automatically removed.
- Labels partly outside the map window can be placed where they are fully visible.
- For labels that might have to follow a curved line - usually street names - it is

possible to automatically avoid positions where the line is too curved, for a more aesthetic result.

- All label and symbol deconflictions are carried out in real time – no cumbersome preprocessing is necessary.



Deactivated

Activated

Image 6. City and road number labels with the new label organizer deactivated and activated.

Productivity improvements for map designers

The Carmenta Studio visual map configuration tool, part of the Carmenta Server SDK, has been improved. It will now automatically show all possible attributes, names and types of feature that may pass through a layer. The attributes are easily accessible in several drop-down menus, for example when configuring visualization and processing properties and conditions.

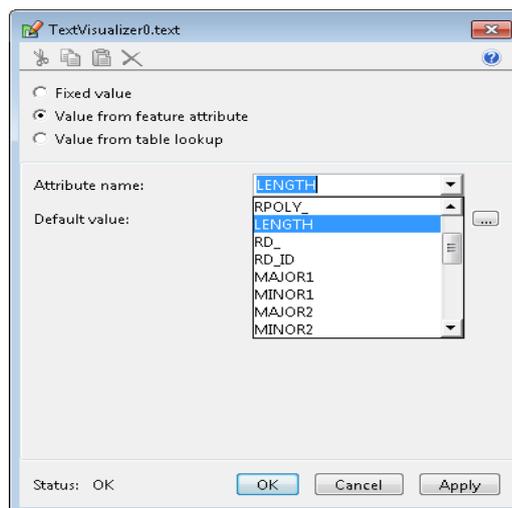


Image 7. Setting the text property to print the value of the attribute LENGTH using the new drop-down menu that automatically displays all available attributes in the layer.

In addition, when configuring properties using lookup tables, the tables can be automatically populated with actual values of the selected attribute.

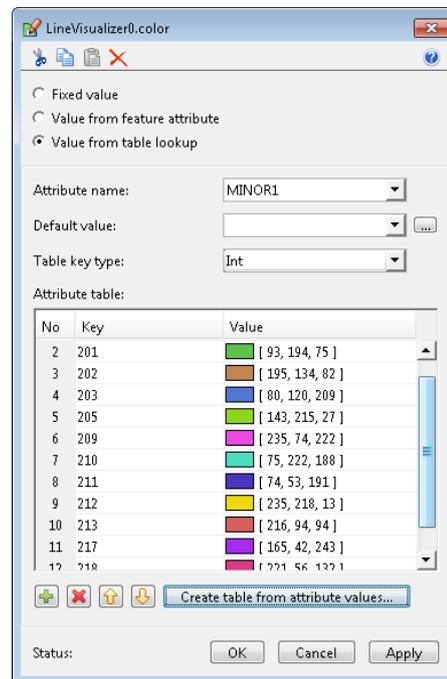


Image 8. The new functionality that automatically fills a colour table with all possible attribute values.

Other new additions and features

Below is a list of other additions, features and improvements made in the Carmenta Server 4.2 upgrade:

- Integrated SLD/SE in WMS legends
- General improvements to the administration tool
- Embedded service for coordinate transformation, based on the OGC Web Processing Service (WPS) specification
- A binary format has been added to the Web Feature Service for more efficient data transfer between Carmenta products
- Improved installation and uninstallation
- Improved documentation and more samples
- Full language support in all OGC interfaces

For more information about Carmenta Server 4.2 please contact:

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