

What's new in Carmenta Server 4.3

The new version of Carmenta Server comes with brand new user interfaces to enable easy publishing of geospatial services and simplify web map site management.

Carmenta Server provides all the necessary functionality for managing, publishing and distributing maps and other geospatial data to end users via internet and intranet services. The new release of Carmenta Server focuses on improved usability. The administration of geospatial services has never been easier thanks to major additions to the admin UI. A brand new Service Control Panel gives the user full and instant control to start, stop, validate and preview services at the click of a button. It is now much easier to add new services. This includes publishing map that are created and maintained by common desktop GIS tools outside the Carmenta product family.

The new version also introduces OpenLayers as the default JavaScript client technology and the package includes a state-of-the art Map Viewer web client. All UIs are implemented according to responsive design techniques and principles enabling any client tool to be run on a mobile device.

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

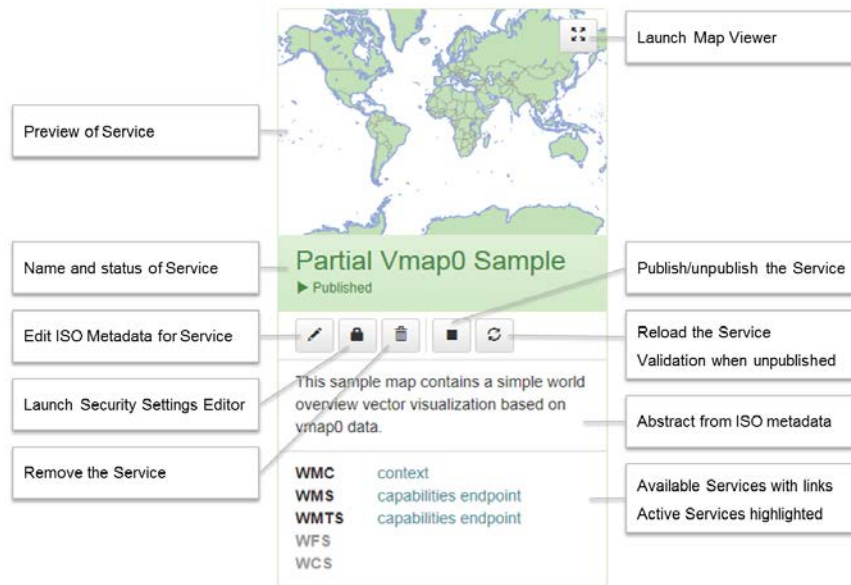
- Improved overall user experience
- Streamlined map publishing from desktop GIS tools
- More services for standardised geospatial data downloads
- New web client tools based on OpenLayers
- New service pack mechanism for service upgrades
- Many other improvements and minor extensions

Improved overall user experience

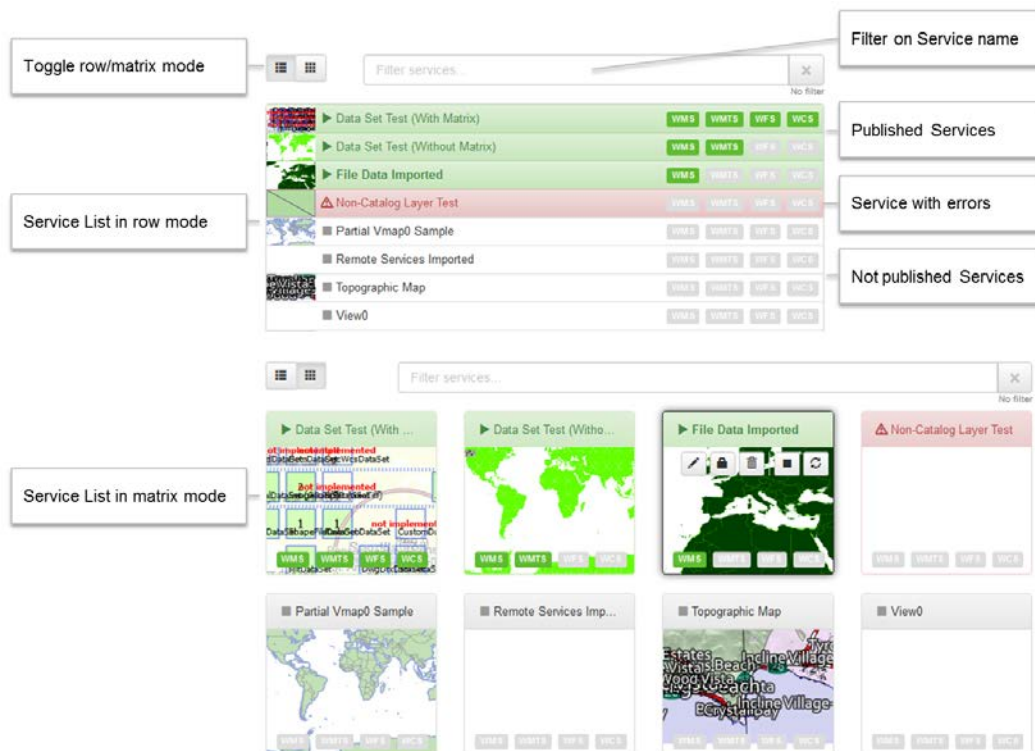
Version 4.3 of Carmenta Server comes with a number of improvements to make the product easier to use. The Server Administration user interface has been refurbished and a number of new functions have been added to give the user a better overview and control of the web site. Services can now be validated in a controlled manner before being published and can also be previewed directly from the administration page. Additions and improvements for increased usability include:

- Further enhancements to the service listing, which provides a better overview of the service status (see diagram on the next page).
- Improved filtering of the service list, which makes it much easier to find a specific service on sites with a lot of services.
- Preview images are now automatically generated and used directly in the service list.
- A number of map server settings have now been rearranged to further prevent unnecessary server restarts.
- A validation function has been added, to check a service before publishing. It checks for a valid data source and performs data indexing if necessary.

- A new Service Control Panel has been added to make all service functions easy to find and use (see diagram below).



- New option to choose between different view modes for the service listing (see diagram below).



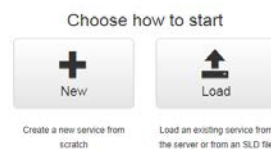
- The built-in Map Viewer client can now be launched directly from the administration page, for quick inspection of published services.

Streamlined map publishing from desktop GIS tools

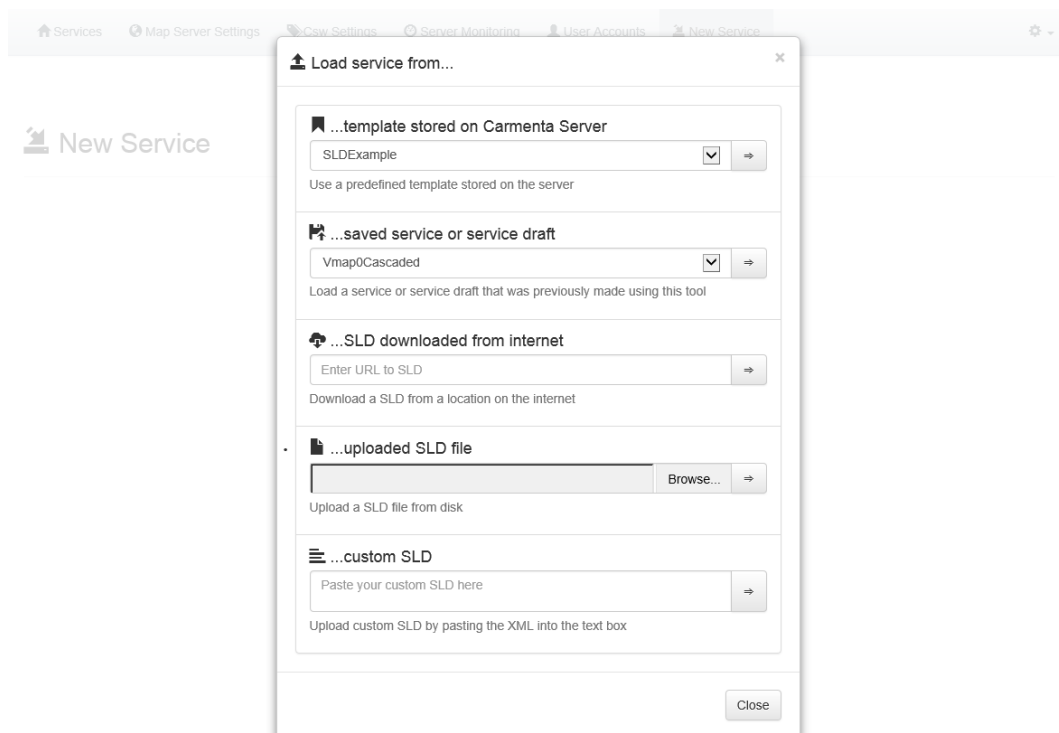
The latest Carmenta Server version offers new and updated ways to publish maps that are created and maintained in popular desktop GIS environments. A new wizard-based tool for adding services has been integrated in the service administration page, for a more controlled process. With Carmenta Server 4.3, the user can add new services from different sources:

- Use the Carmenta Studio graphical map configuration tool (part of the Carmenta Server SDK licence). Simply add the created .px file to the folder used by Carmenta Server and the map will automatically appear as an unpublished service in the service list.
- Use the New Service tab on the administration page to create a new service from scratch or load an existing service using Styled Layer Description (SLD) documents. Select the chosen method of adding a new service and start the wizard as shown below.

New Service



If loading a service from an SLD, the user will be presented with a few alternatives as shown below.

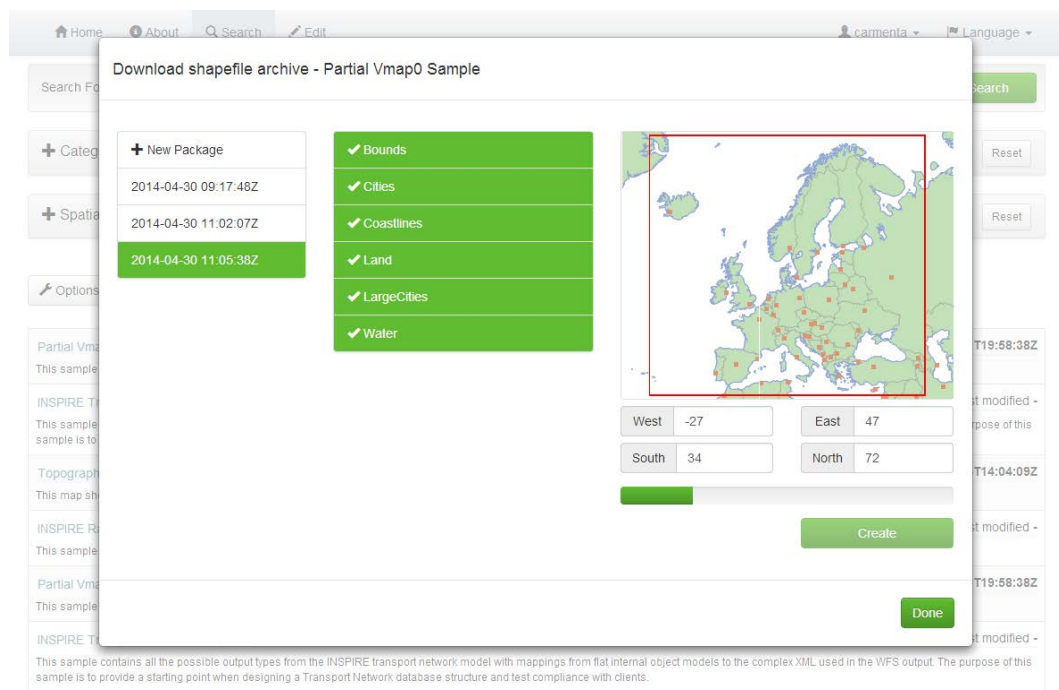


- Another efficient alternative is to use Carmenta Exporter (the free add-on to ESRI ArcGIS desktop) to export a map project with a preserved ESRI theme and layout to Carmenta Server. Add the exported .px file to the right folder and the map will

automatically appear in the service list. Once published, the map will appear as a WMS with the same cartographic appearance as in the original ArcGIS project. Please contact Carmenta for information on how to download the latest version of this free software component.

More services for downloading geospatial data in standardised ways

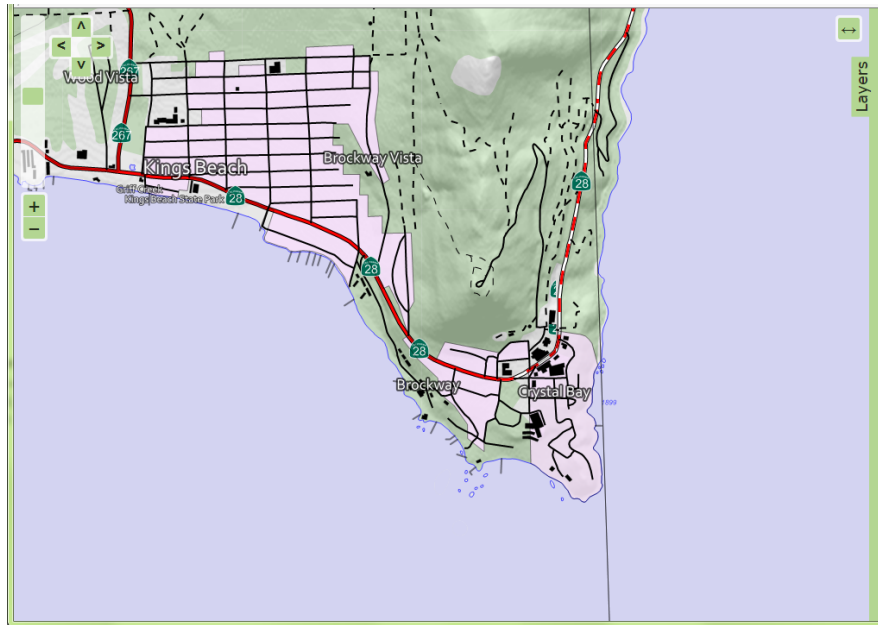
Carmenta Server already has a number of unique features for creating dynamic and efficient downloading solutions. Most notable is perhaps the ability to make data model transformations on the fly. This allows an organisation to keep its data in a domain-specific data model and make all necessary model transformations during the download process. A number of improvements to this functionality have been made as part of this new Carmenta Server version, including support for multiple data models in INSPIRE themes. Another important extension to improve data downloading solutions is the introduction of the ESRI Shapefile format, as a new way of packaging feature data to be downloaded. The user can now easily define a geographic area and transform selected feature data in that area to Shapefile geometries, thereby streamlining the packaging and downloading process. Screenshot of the Download Shapefile UI is shown below.



State-of-the art web map client based on OpenLayers

A major step has been taken in the new Carmenta Server version with the integration of OpenLayers (OL) as the default and bundled web map client technology. The previously embedded Rich Web Client (RWC) toolkit is no longer distributed as part of Carmenta Server. Existing RWC applications will still be supported and work with the 4.3 version. The new web client platform will benefit greatly from the vivid OL development community. A new OL-based Map Viewer client is part of the Carmenta Server 4.3 version (see below). Carmenta has chosen the latest OL v. 3 generation as the basis for the new map client, providing a lot of benefits:

- Use of the latest JavaScript technology, including HTML5, and prepared for more advanced rendering libraries, such as WebGL, etc.
- Very modern UI design with a simple, sleek appearance, including a new fullscreen mode.



- Out-of-the-box support for so called responsive design, allowing a web map site to be automatically adapted to mobile devices.
- A layer control that supports hierarchical WMS layers.
- Easy to embed, extend and customise the component through contributions from the OpenLayers user community.

A service pack mechanism for service upgrades

A significant improvement to the usability of the product is the new service pack mechanism introduced in the 4.3 version. A user organisation can, with the 4.3.0 version and later, install all service releases as software patches without having to carry out a complete reinstall. This greatly reduces the time and effort needed to make minor adjustments to live production environments. It also increases the security of new service pack installations, as it is always possible to roll back the installation. The new mechanism also enables more controlled generation, distribution and installation of customer-specific patches.

Other new additions and features

Please find below a list of other additions, features and improvements included in the Carmenta Server 4.3 upgrade:

- A UI has been added for setting and editing restrictions when running the Carmenta Server in SecureMode.
- The built-in log function has been extended and now includes the web service components, making the troubleshooting of certain issues much simpler.
- The WMS interface has been upgraded, to standardise the handling of time and elevation parameters.

- The ability to control advanced settings for a WMS image has been added, offered by real time geoprocessing functions in Carmenta Server such as dynamic hill shading for elevation data.
- A new geoprocessing function has been added, to calculate slope and aspect from any elevation data in real time.
- A feature has been added to automatically connect, merge and resample raster data when reading from different raster data sources.
- Improved UTM and MGRS grid generation now automatically creates a suitable visualisation.
- The Carmenta Catalogue Extension interface has been significantly improved, giving Carmenta Server-based applications a more structured way of handling background maps and associated metadata. A Carmenta Catalogue can be instantiated from either a local folder or from an OGC CSW service.
- As a result of the above interface improvement, Catalogue Maps can now be created directly from Carmenta Studio in the Carmenta Server SDK version.

For more information about Carmenta Server 4.3 please contact:

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