Geoconcept Web Reference Guide

GEOCONCEPT SAS

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Introduction

Geoconcept Web is the Geoconcept solution for sharing information and geographic services in the form of Web services.

LBS allows users to consult and create geographic data, view statistics, and also to use advanced services such as geocoding, itinerary or route calculation, within a single Web architecture.

The aim is to make geographic information accessible to all end users, for example via *off-the-shelf* solutions supplied by Geoconcept. Easy and intuitive to use when creating a web site with geographic content, LBS features a series of API's and a development kit specially designed for integrating maps and geographic services in existing sites and applications.

Geoconcept Web is easily integrated within information systems based on Service Oriented Architectures (SOA) and enables high-level interoperability through the utilisation of standard protocols (web services, API's, links to standard DBMS…).

Already widely used on high traffic sites, this solution is geared to delivering performance, and has been specially designed for distributing and publishing huge volumes of data and geographic services to a large number of users simultaneously.

Geoconcept Web features ultra-fast and intuitive display clients, providing maximum ergonomy and ease of use to make cartography available to the widest possible range of end users.

Components

There are three main components in Geoconcept web enabling integration of cartographic, geocoding and itinerary calculation features within web applications. A more detailed presentation of each of these components is available in the following document.

The geoconcept-web application provides an administration and command interface for handling parameters linked to application components or add-ons.

Three Geoconcept Web add-ons

Mapping component: Geoconcept Web Map

Basic principles

Geoconcept Web Map (formerly called Geconcept Internet server or GCIS) is the solution developed around the Geoconcept Geographic Information System designed specially to make cartographic data available on-line along with web services related to the utilisation of maps and mapping data. The application allows the user to enrich the content of Internet, intranet or extranet sites with features for

consulting geographic data interactively, but the user can also create fully functional cartographic web applications enabling work on these data.

The component offers a series of user-friendly functions to the user for browsing maps via Geoconcept that have been configured with a view to their publication on the web server.

Functionalities

The Geoconcept Web Map component is the component to use to display a map in your web applications. There are several ways to exploit this facility as described in the following paragraphs.

The client used is the DHTML/Javascript client used mainly to develop highly responsive user interfaces for publishing the Geoconcept map, while ensuring compatibility with the main market standard browsers.

It is used client side via a JavaScript API described in the API and Web Services / API Javascript chapter of the documentation.

Universal Geocoder: the geocoding component

This component is designed to integrate the Universal Geocoder (UGC) geocoding engine within the Java Enterprise Edition (JEE) platform, and its sub-components as the Tomcat servlet engine. By extension (deployment of the optional module) the product can be used for the purpose of deploying a geocoding web service.

Basic principles

From a functional point of view, geocoding is an operation that sets out to obtain geographic coordinates on postal addresses. For more information on geocoder terminology (types of geocoding, tolerances, …), refer to the general user's guide for Universal Geocoder. This manual sets out to describe specifically the deployment of Universal GeoCoder for Java Enterprise Edition (ugc-jee).

Geocoding referentials consist of a set of files with extensions .ugc.xxi. This files are delivered by Geoconcept or can be constructed from Geoconcept tools.

The geocoding referential can be created from addresses (geocoding of addresses by users), but can also integrate the business data of a particular customer.

The projection system for repository files is defined when generating the table. You can adjust the settings for parameters in this reference table, and in particular the projection system, on the fly using a simple web application.

Functionalities

The geocoding web service returns, in addition to the X and Y coordinates, the address corrected and validated in the repository, the type of geocoding applied as well as a score out of 100, expressing the quality of recognition.

The different types of geocoding are:

- on towns
- on streets
- on the interpolated street number
- on the exact street number

The geocoding web service can be used via different protocols, that are described in the Universal Geocoder Server (ugc) reference guide.

SmartRouting: the itinerary calculation component

Basic principles

This server corresponds to the calculation of itinerary, matrix, isochrone, reverse geocoding and for search around. It uses the SmartRouting calculation engine.

Itinerary calculations are based on a file describing the network called graph. This file is created from the Geoconcept GIS and routing and way finding databases, such as those published by HERE. SmartRouting allows you to obtain a full itinerary while taking into account essential characteristics (traffic regulations, and speed profiles, for example, but also numerous special cases) along with the description of the route/road, the journey duration between each segment and the distance.

Over and above the start and arrival points, intermediate steps can be defined. The itinerary calculation method should be indicated: shortest distance, or shortest time, so the characteristics of the road network can be taken into account in the calculation. Finally, constraints for the itinerary calculation can be entered: for example, the itinerary must be toll free.

Functionalities

This component performs:

- itinerary calculation, with creation of a route sheet,
- calculation of multiple times/distances.

Installation

Geoconcept Web is a series of Geoconcept components offering functionalities for building a cartographic website.

In addition to the Geoconcept add-ons, in order to operate the solution requires a JVM, a web server, an application server and a database. With the exception of the JVM, all the precited elements can be installed via the Geoconcept Web Installation wizard.

> Essential to every configuration will be the prior installation on the host machine of a Java virtual machine. Cf. paragraph System requirements.

There are two possible methods for installing the solution:

- The Automatic installation installs all components supplied, including the database (PostgreSQL). This method is recommended since it handles all the parameter settings necessary and once completed, the solution can be used immediately. Refer to the Automatic installation [https://mygeoconcept.com/doc/gcweb/docs/en/installation-book/index.html] document;
- A Custom installation if some of the components are already installed, notably the applications server or the database server. This is aimed at advanced users wishing to customise the installation.

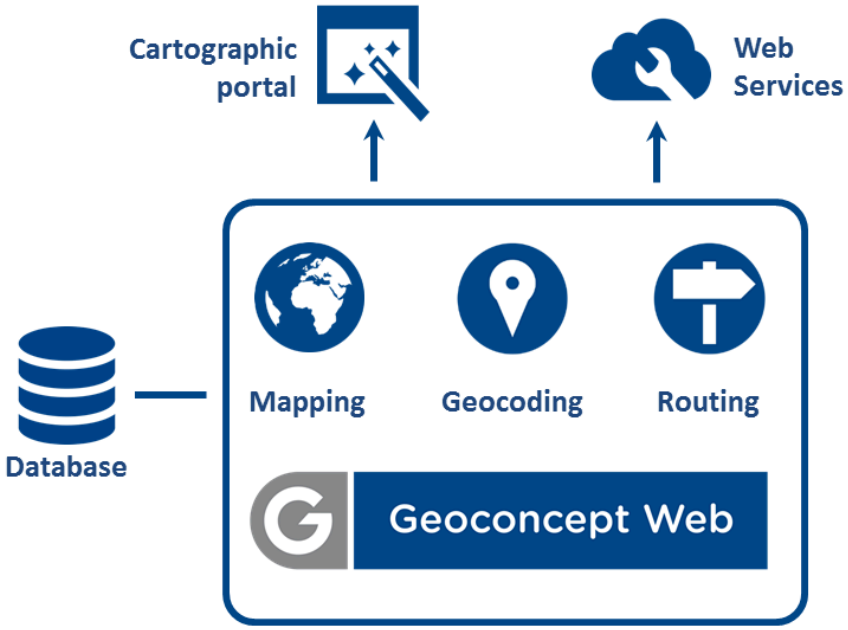
In the case of a custom installation, it may be necessary on completion of the installation, to perform a certain number of configurations, depending on the choices made:

- Configuring Tomcat;
- Configuration of the database.

For further details of these parameter settings, consult the chapter called Manual installation

Architecture schema

Architecture schema



System requirements

JVM

Geoconcept Web requires a 64-bit JVM version 1.8.

A JVM can be downloaded from the following java site: http://www.java.com/fr/http://www.java.com/fr/.

Run the executable file downloaded, and follow the instructions given by the installer.

The installation directory to use for the JVM is not critical.

To validate the installation, run the cmd software via the Execute command in Windows (Start menu / execute command). Then run the "java-version" command. If the installation has been correctly performed, the command should return the version of the JVM installed as well as the list of options for the JVM.

Example of a response to the ***'java-version'*** command

```
java version "1.8.0_151"
Java(TM) SE Runtime Environment (build 1.8.0_151-b12)
Java HotSpot(TM) 64-Bit Server VM (build 25.151-b12, mixed mode)
```

Geoconcept Web is not compatible with JAVA 10.

HTTP or HTTPS?

It is recommended using HTTPS on websites, both for its site classification systems in search results, but also to handle security issues, since information exchanges between users (browsers) are encrypted and cannot, therefore, be easily intercepted.

The features that collect your location data (Geolocation Widget, Route Planner Widget, …) only work in HTTPS.

How can I put HTTPS on my site?

You will need to contact your IS/hosting provider who will suggest certificates and setup methods that can vary from one hosting provider to another, or as a function of your server architecture.

Setting up an SSL certificate is described (in English) in the official documentation at the site Tomcat [https://tomcat.apache.org/tomcat-8.0-doc/ssl-howto.html].

Example of setting up HTTPS for testing

This method describes how to roll out a self-signed certificate with OpenSSL.

A self-signed certificate allows you to test all Geoconcept Web functionalities, but as it is not a certificate delivered by an official organisation, users will see, on opening the portal, messages indicating "*Connection not secure*", "*There is a problem with this site's security certificate*", "*Your connection is not private*", …

System requirements

- JVM must be installed on the server: this should be a JDK version, and not JRE, since OpenSSL requires utilisation of the *keytool* library available only with the JDK version.
- If the JAVA_HOME environment variable does not exist, create it in the command line and make it point at the JDK folder:

```
set JAVA_HOME=<Path ex: c:\Program Files\Java\jdk1.8.0_60>
```

- If OpenSSL is not installed, retrieve the binaries from one of the site's Community pages OpenSSL [https://www.openssl.org/community/binaries.html] and deploy them on the server.

Creating the self-signed certificate

- Create a folder on the server to store the keystore. As an example, we will take *c:/keystore*.
- From the folder created earlier, in the command line, run the certificate creation line:

```
"%JAVA_HOME%\bin\keytool" -genkey -alias tomcat -keyalg RSA -keystore keystore.jks
```

Fill in the items of information requested and retain the password *PASSWORD* as filled in already to use in the next step.

- Stop Tomcat, and then modify the *server.xml* file (in the \tomcat\conf\ folder)
  - De-comment the block

```
<Connector port="443" protocol="org.apache.coyote.http11.Http11NioProtocol"
           maxThreads="150" SSLEnabled="true" scheme="https" secure="true"
           clientAuth="false" sslProtocol="TLS" />
```

- add to the interior of this block

```
keystoreFile="c:\keystore\keystore.jks" keystorePass="PASSWORD"
```

- either

```
<Connector port="443" protocol="org.apache.coyote.http11.Http11NioProtocol"
           maxThreads="150" SSLEnabled="true" scheme="https" secure="true"
           clientAuth="false" sslProtocol="TLS" keystoreFile="c:\keystore\keystore.jks"
           keystorePass="PASSWORD"/>
```

The certificate is deployed and you can then access your portal:

- HTTP: http://localhost/geoconcept-web
- HTTPS: https://localhost/geoconcept-web/

Force all applications to use HTTPS

> Take care when adding these lines, as this will force all applications deployed in Tomcat to use the HTTPS protocol, check before applying the modification that they are really compatible with this protocol.

- Stop Tomcat, and then edit the web.xml file (in the \tomcat\conf\ folder) adding <web-app> block:

```
<security-constraint>
    <web-resource-collection>
    <web-resource-name>Entire Application</web-resource-name>
    <url-pattern>/*</url-pattern>
    </web-resource-collection>
    <user-data-constraint>
    <transport-guarantee>CONFIDENTIAL</transport-guarantee>
    </user-data-constraint>
</security-constraint>
```

Any HTTP query is re-routed in HTTPS

Centralised authentication

Geoconcept Web authorises centralisation of authentications, in order to externalise handling of user identifiers and passwords to a third party directory.

You can EITHER use the unique authentication or Single Sign-On (SSO) featured on social networks (Google and/or Twitter), OR use your organization's Active Directory or your Windows domain. Of the three methods suggested, the last one alone allows users to access Geoconcept Web without having to go through the login page.

To do this, having first stopped the Tomcat service, you will need to add a text file called **`geoweb-credentials.properties`** in the **`"<TOMCAT_HOME>"\lib\`** folder, and edit it depending on requirements, as explained in the following sections.

In the **`geoweb-credentials.properties`** file, you will be able to combine the social network and Active Directory SSO configurations. However, using SSO with Active Directory is not possible with the other methods.

Social networks (SSO)

Google

Activation

Utilisation of Google in SSO is in two stages

- Activation of the Google+ API

Go to the Web site API Google+ [https://console.developers.google.com/apis/api/plus.googleapis.com/], connect with a Google account, and then click on Activate.

- Create a project

Go the Web site API Google [https://console.developers.google.com/cloud-resource-manager], connect with a Google account, and click on Create a project, enter the Project name, then click on Create.

Create an identifier, choose ID client Oauth, then Web Application as Application type, enter a Name, give an authorised URI redirection in the following format:

```
http://<server>/geoconcept-web/google/callback?client_name=Google2Client
```

Next, retrieve:

- **`Client ID`** , example: 1234567890123-85v762t4vk45895qixaiuf4b37be.apps.googleusercontent.com
- **`secret client code`** , example: U9R5bpR9PaSfmu984S

Configuration

Edit the **`geoweb-credentials.properties`** file adding the following parameters:

- **`google.activated`** : true or false to activate or de-activate the function
- **`google.key`** : the value of **`Client ID`**
- **`google.secret`** : the value of **`secret client code`**

- **`google.callbackUrl`** : *`/google/callback`* callback filepath
- **`google.declaredCallbackUrl`** : callback url (ex: *`http://<server>/geoconcept-web/google/callback`*)

Example

```
#Google
google.activated=true
google.key=1234567890123-85v762t4vk45895qixaiuf4b37be.apps.googleusercontent.com
google.secret=U9R5bpR9PaSfmu984S
google.callbackUrl=/google/callback
google.declaredCallbackUrl=http://<server>/geoconcept-web/google/callback
```

Administration

Having edited the *`geoweb-credentials.properties`* file, start the Tomcat server.

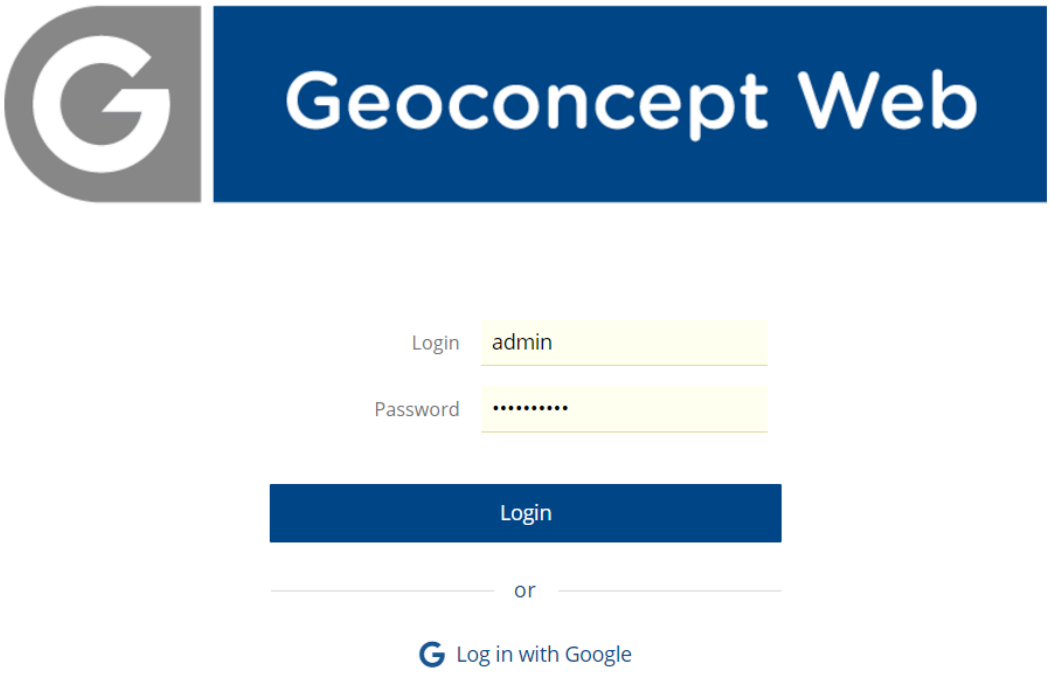
From the Administration ‣ Rights ‣ Origins menu, choose the GOOGLE identifier

- Rename the Name as necessary
- Authorise the user creation
- Choose a Reason, for example geoconcept.com will filter only on corresponding addresses.
- Choose the group in which users will be created by default. When the account is created, it is possible to change group via the Administration ‣ Rights ‣ Users menu.

Utilisation

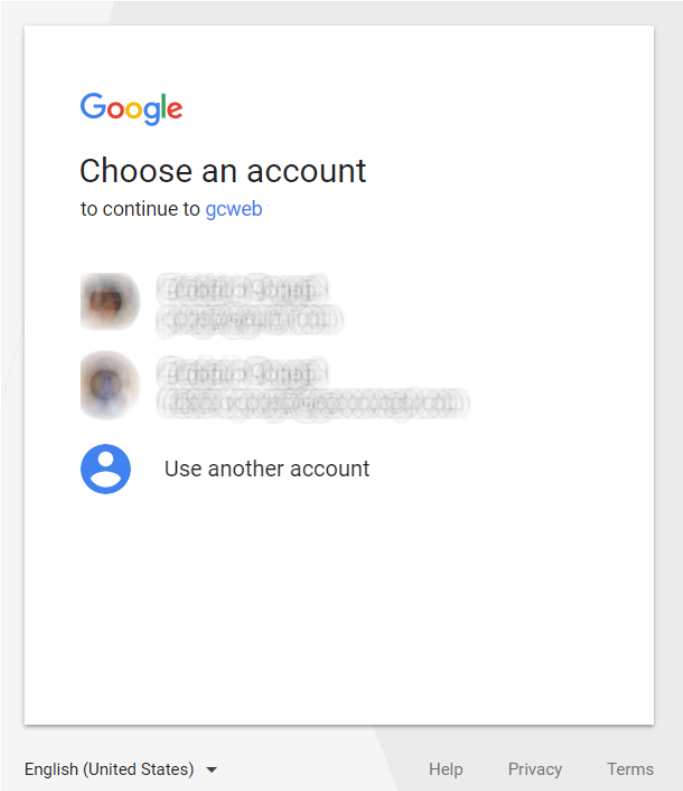
To connect using Google SSO, the user should click on Connect with Google.

Login page with Google SSO



then connect to Google or choose the Google account to use.

Select a Google account



If the account does not exist in Geoconcept Web, it is created automatically the first time a connection is established.

Twitter

Activation

Activation of the Twitter SSO takes place in a single step:

- Creation of a Twitter application

Go the Web site Application Management [https://apps.twitter.com/app/new], and connect with a Twitter account, and then type in the formula:

- **`Name`** : The displayed application name
- **`Description`** : Description of the application
- **`Website`** : URL for the application in the format http://<server>/geoconcept-web/twitter/callback
- **`Callback URL`** : Leave empty

Next, retrieve:

- **`key`** , example: U9R5bpR9PaSfmu984S
- **`secret`** , example: j7m82A2SyTh64QPf3uS3ZsbZqa5jGdU6MU95u74U

Configuration

Edit the **`geoweb-credentials.properties`** file adding the following parameters:

- **`twitter.activated`** : true or false to activate or de-activate the function
- **`twitter.key`** : the value of **`Client ID`**
- **`twitter.secret`** : the value of **`secret client code`**
- **`googtwitterle.callbackUrl`** : callback filepath /twitter/callback
- **`twitter.declaredCallbackUrl`** : callback url (ex: http://<server>/geoconcept-web/twitter/callback))

Example

```
#Twitter
twitter.activated=true
twitter.key=U9R5bpR9PaSfmu984S
twitter.secret=j7m82A2SyTh64QPf3uS3ZsbZqa5jGdU6MU95u74U
twitter.callbackUrl=/twitter/callback
twitter.declaredCallbackUrl=https://<server>/geoconcept-web/twitter/callback
```

Administration

Having edited the *`geoweb-credentials.properties`* file, start the Tomcat server.

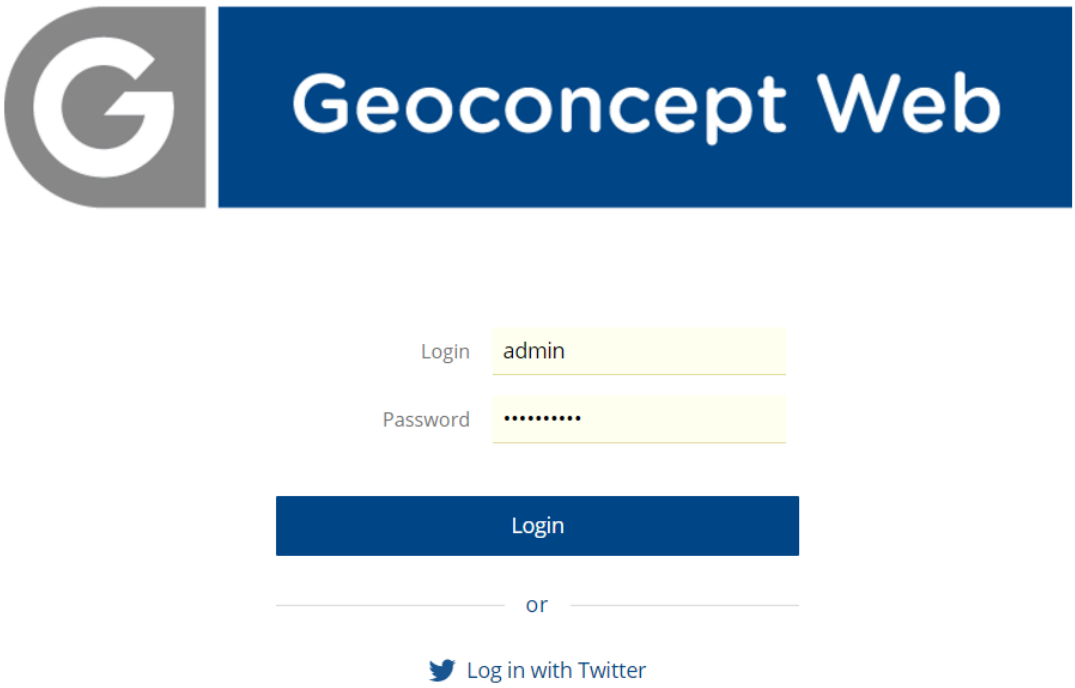
From the `Administration ‣ Rights ‣ Origins` menu, choose the TWITTER identifier

- Rename the Name as necessary
- Authorise the user creation
- Pattern (not used with this method)
- Choose the group in which users will be created by default. When the account is created, it is possible to change group via the `Administration ‣ Rights ‣ Users` menu.

Utilisation

To connect using the Twitter SSO, the user should click on `connect with Twitter`

Login page with Twitter SSO



then connect to a Twitter account.

If the account does not exist in Geoconcept Web, it is created automatically the first time a connection is established.

Active Directory

> To connect via the Active Directory, it will be necessary that the server on which Geoconcept Web is installed can access the organisation's AD server.

Configuration

Edit the `geoweb-credentials.properties` file adding the following parameters:

- `ad.activated` : true or false to activate or de-activate the function
- `ad.domain` : domain name
- `ad.url` : server url

As well as the following line:

```
ad.searchFilter=(&(objectClass=user)(userPrincipalName={0}))
```

Example

```
#Active Directory
ad.activated=true
ad.domain=domain
ad.url=ldap://domain:port/
ad.searchFilter=(&(objectClass=user)(userPrincipalName={0}))
```

Administration

Having edited the `geoweb-credentials.properties` file, start the Tomcat service.

From the Administration ‣ Rights ‣ Origins menu, choose the AD Identifier

- Change the name as necessary
- Authorise the user creation
- Pattern (not used with this method)
- Choose the group in which users will be created by default. When the account is created, it is possible to change group via the Administration ‣ Rights ‣ Users menu.

Utilisation

The user connects to the application using their usual identifiers: if the account does not exist in Geoconcept Web, it is created automatically when the first connection is established.

Active Directory and Windows domain (SSO)

> To be able to login to this method, the server on which Geoconcept Web is installed must be able to access EITHER the organization's AD server, OR the Windows domain.

Configuration

Edit the `geoweb-credentials.properties` file adding the following parameters:

- `ssoad.activated` : true or false to activate or de-activate the function

Example

```
#SSO AD
ssoad.activated=true
```

Execute the following SQL script, replacing the *active.directory.name* string with the Active Directory name, or that of the Windows domain to use:

```
INSERT INTO public.gw_parameter(
        id, description, value)
        VALUES ('authentification.ssoad.domain', '', 'active.directory.name');

INSERT INTO public.gw_user_origin(
        id, origin_label, include_pattern, allow_user_creation)
        VALUES ('SSOAD', 'SSOAD', '', 'T');
```

```
INSERT INTO public.gw_user_origin_group_def(
        origin_id, group_id)
        VALUES ('SSOAD', '3');
```

then start the Tomcat service.

Administration

From the Administration ‣ Rights ‣ Origins menu, choose the SSOAD identifier

- Change the name as necessary
- Authorise or not user creation (enabled by default)
- Pattern (not used with this method)
- Edit the group in which users will be created (Super administrator by default). Once the account is created, you can change group via the Administration ‣ Rights ‣ Users menu.

The `authentification.ssoad.superAdminRole` parameter (cf. Advanced settings section), serves to define the Windows role (right) allowing you to assign Super administrator rights to a user.

The `authentification.ssoad.overloadCreateUser` parameter (cf. advanced settings section), allows you to create users when Geoconcept Web is still in its original unconfigured state. If the source mode does not authorise creation of users, and this parameter is set to *true*, the application will assume the source configuration and the users will be ceated automatically.

Utilisation

The user connects to Geoconcept Web without having to enter their identifiers, on condition that this user is already authenticated on the machine from which they are accessing the application. If the account does not exist in Geoconcept Web, it is created automatically the first time the connection is established.

With this method, the disconnect function from Geoconcept Web will not be operational.

For an utilization in Firefox, you will need to declare the site to use as being valid for a SSO authentication. To do this, you should edit the Firefox configuration keys (via the about:config URL) indicating the site as a value for the *network.negotiate-auth.delegation-uris* and *network.negotiate-auth.trusted-uris* variables. For example, to access http://monsite:xxx/geoconcept web you should use the http://monsite:xxx value.

A current limitation in the Edge browser is that, even when SSO has been set up, a popup still opens in which the user must log in to access the Geoconcept Web application.

Updating outdated software versions

(fr) Pour procéder à une mise à jour, Nous recommandons de désinstaller la version installée, puis de procéder à l'installation de Geoconcept Web en suivant la méthode automatique [https://mygeoconcept.com/doc/gcweb/docs/fr/installation-book/index.html]. Au préalable, il est préférable de faire les sauvegardes nécessaires (Cf. ci-après dans le § Sauvegarde).

Compatibility

JAVA

- Versions 6.1, 7.0, 7.5 and 2021 of Geoconcept Web are only compatible with version 1.8 of the JVM.

Apache Tomcat

- We recommend using Apache Tomcat version 8.5.
- Certain incompatibilities have been flagged up with versions 7.0 of Apached Tomcat.

Creating back-ups

Proceed as follows using *'PROJECT'* as the name of the current project:

- Stop Tomcat
- Archive the current WAR
- Save the database
- Configuration files, in the event that these have been modified. For version 2021 SP1 and later versions, configuration files can be saved via the de-install assistant in “<DATA_HOME>”\backup.
  - “<TOMCAT_HOME>”\conf\Catalina\localhost\geoconcept-web.xml
  - “<TOMCAT_HOME>”\conf\\server.xml
  - “<TOMCAT_HOME>”\lib\geoweb-credentials.properties

> You will need to restore the back-up if the PostgreSQL database supplied with the installer is used.

In the event that you want to keep the Tomcat version already present on the server (and avoid its being replaced by the one installed by the installer), you should also:

- Delete the “<TOMCAT_HOME>”\webapps\PROJET folder
- Delete the “<TOMCAT_HOME>”\work\Catalina\localhost\PROJET

Finally

- Empty the browser cache

Updating the War only

Users who wish to update their project (the .War file) exclusively should proceed as follows:

Follow the installation procedure described under here [https://mygeoconcept.com/doc/gcweb/docs/en/installation-book/index.html].

- Choose Custom installation as the installation type.
- In the Select the components to install step, uncheck all components except for Web App in Geoconcept Web.
- Next, follow all of the steps in the installer EXCEPT the database configuration step, that you can ignore.

The geoconcept.war file is deployed in the “<GEOCONCEPT_WEB_HOME>”\tomcat\webapps folder. It can be renamed and copied in the “<TOMCAT_HOME>”\webapps\ folder

Change in behaviour

The new versions behave slightly differently.

Widgets

Earlier versions of Widgets are not necessarily updated in the new Portals. In the event of any malfunction or anomaly, from the Composer:

- Delete the widget;
- And then recreate it.

CSS

Portals using personalised CSS may be impacted when you change versions. In this instance, you will need to modify the CSS concerned with the editor Cf. Annotation Section, using the style sheet in the appendix as example: cf. house style for a personalised portal.

Changes linked to versions

Geoconcept Web 2021

(fr) Un changement de comportement au niveau des styles des couches vectorielles oblige lors de la migration depuis n’importe quelle version antérieure à faire les opérations suivantes :

- (fr) depuis le menu @menu(Administration / Paramètres / Paramètres avancés) passer la valeur du paramètre @menu(geographics / vectorLayer / legacyStyles) à true. Si le paramètre n’existe pas l’ajouter : *geographics.vectorLayer.legacyStyles*.

- (fr) depuis le menu @menu(Couches / Couches vectorielles / Styles par défaut), ouvrir le style à associer, dans la liste déroulante Affecter un style aux couches choisir la ou les couches à modifier puis client sur le boutton @button(Affecter).

Geoconcept Web 2021

From Geoconcept Web 2021 onwards, the *Starter*, *Standard* and *Enterprise* versions will disappear and are replaced by a single version featuring the full functionality set.

The old *Object manager* mechanism is no longer supported from Geoconcept Web 2021, but the documentation is still available in the Appendix.

Selection in the map widgets (Map selection, Map selection using points, and Map selection in a rectangle) have been discontinued and are no longer supported, however they can be reactivated if you contact Geoconcept technical support. We recommend using instead the vector selection tools Selection, Selection by rectangle, circle or polygon.

New geocoding file format. The old *.UGC files are no longer compatible with this version of Geoconcept Web. Files in the new format can be obtained from the download page myGeoconcept [https://mygeoconcept.com/] or can be built using the 2021 (or later) version of the Geoconcept GIS Generating goecoding files.

Verifying that the application operates correctly

To verify that the installation of the application is operational, you can try viewing a layer of data generated by a Geoconcept map. If the geographic layer displays correctly, the configuration of the application can be considered as successful.

To perform this verification, you need to create a layer in Geoconcept Web. Do this via the Tiled layers sub-menu found in the Administration tab, and the Layers menu.

When you click on the Create button, you should fill in the following fields in the Definition tab.

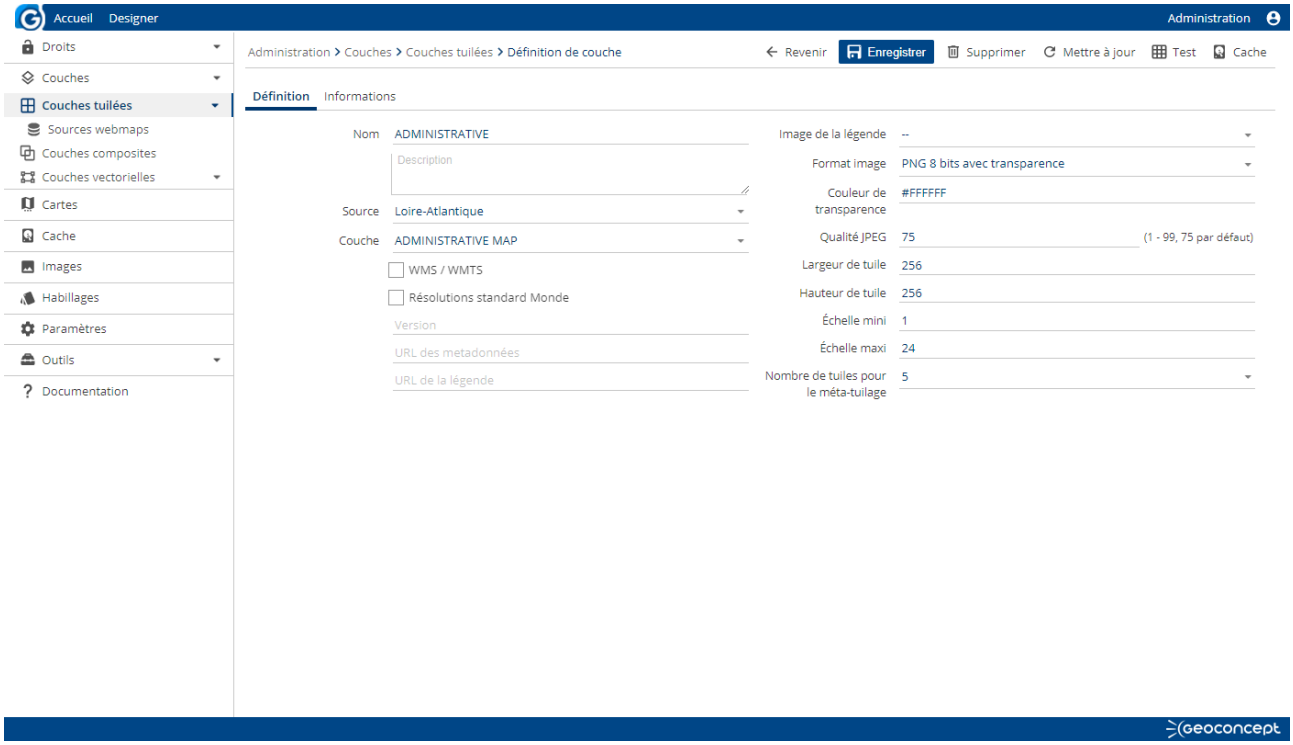
- Name,
- Map: drop-down menu enabling choice of a Geoconcept map in a list of maps available via Geoconcept Web Map.
- Tab: drop-down menu enabling choice of a view tab sourced by the Geoconcept map,
- Map projection system: supply the EPSG code for the map,
- Image format: choice of the image format for tiles that will be generated.

In the Information tab, certain information relating to the map and the view tab chosen appear and cannot be modified.

These items of information are: the projection system, the precision / the map units / the min and max X and Y coordinates.

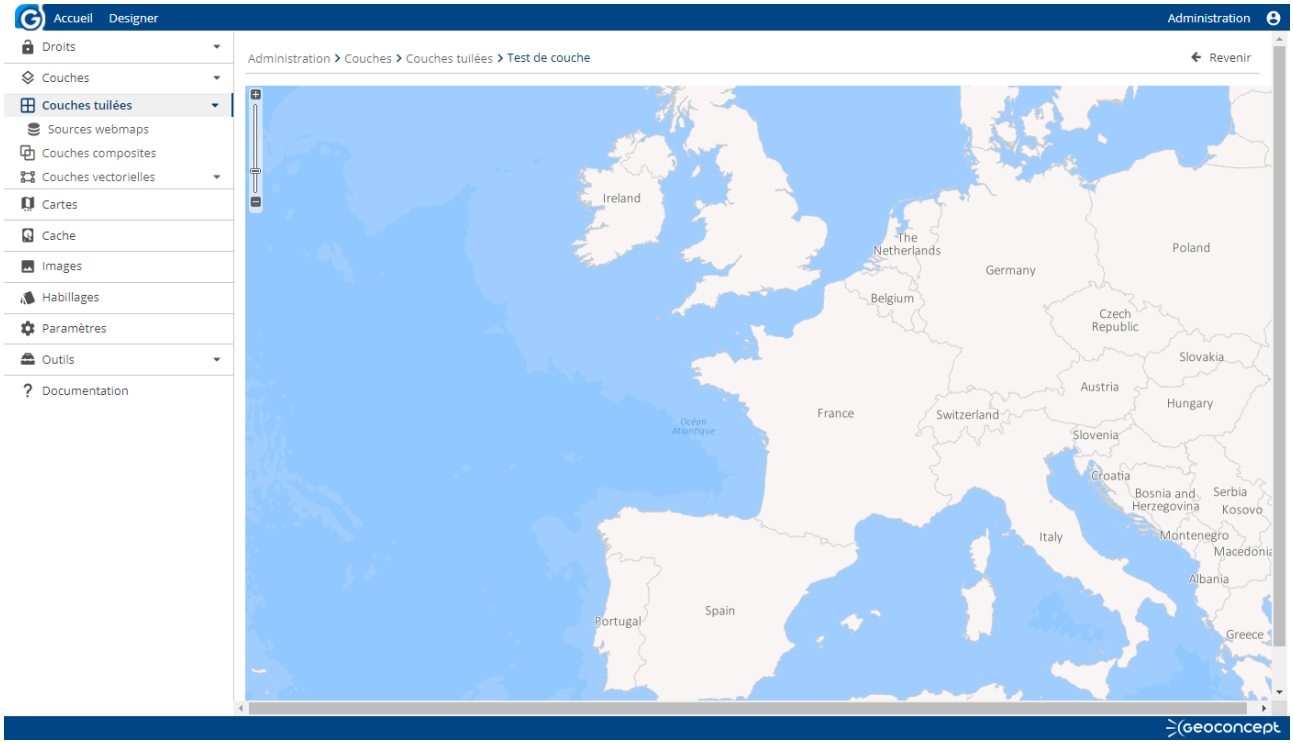
Validate next by clicking on Save .

Configuring a test map



Go back into the newly created layer's parameters, click on the Test button, and a preview of the Geoconcept map displays on the screen.

Result of the layer display test



Standard parameter settings

Geoconcept Web is installed with all parameters set as required for it to operate correctly, however you may need to adjust some parameter settings to adapt them for specific utilisations.

Below is a list of the most frequently used parameters. In most instances, to alter them, you will need to go into the Administration ▸ Parameters menu.

Note also that by default the sub-directories needed by Geoconcept Web are under “C:\Geoconcept Web” designated by **“<DATA_HOME>”** below.

Advanced parameters are described here.

Maps

The directory in which maps in Geoconcept format (.gcm, .gcr) are stored is defined by Data / Map - Path directory in the administration Settings.

Geocoding

The geocoding directory name (made up of a series of files with .ugc.xxi extensions) stored in the Data / Geocoding - Geocoder datasource name folder in the administration Settings.

To use several reference tables simultaneously, consult the World geocoding section.

Advanced geocoding parameters are described here.

Autocompletion

The directory in which the reference files are stored is defined in Data / Autocompletion - Autocomplete path directory in the administration Settings.

> Caution, you must only indicate the tree structure below the *autocomp* folder. In our case, the parameter value is Auto-completion, for the **“<DATA_HOME>”\data\maps\autocomp** folder.

To construct the autocompletion files, refer to the generation of autompletion files section.

Advanced autocompletion parameters are described here.

Route calculation

The name of the graph or network stored in the “<DATA_HOME>”\data\maps folder should be defined in Data / Route Calculation - Route datasource name in the administration Settings.

To use several graphs simultaneously, consult the Road graphs section.

Advanced itinerary calculation parameters are described here.

Symbols and rasters

When integrating symbols and rasters from the Geoconcept GIS within Geoconcept Web portals, you will need to place the respective files in the following folders:

- Clipart (.png), (.emf), (.wmf), (.svg), …
- Symbols (.sbl)
- Raster

These file paths can be changed by modifying their values via the Administration ▸ Parameters menu:

- Clipart Display / Symbols - Clipart path directory
- Symboles Display / Symbols - Symbols path directory
- Raster Display / Raster - Raster path directory

Display

- ExtraDrawSize indicates the value in pixels (15 by default). It may be useful to increase the value in order to prevent drawings of some layers (Publisher, label, symbols) being truncated. It will usually help to set the value upwards of 200 pixels. For symbols, use half the symbol size maximum value.

This value can be changed by editing the Display / Parameters - ExtraDrawSize value in the administration Settings.

Webmaps

In the case where the Geoconcept map published with Geoconcept Web Map uses Webmaps that require a licence file (Here, Bing, …) you will need to copy the licence file into the following folder: **“<GEOCONCEPT_WEB_HOME>”\gc\jee\gc\home\Licenses** .

Publishing a map

To publish a map from the Geoconcept GIS, consult see corresponding FAQ on myGeoconcept [https://mygeoconcept.com/fr/faq/publier-une-carte-de-geoconcept-vers-geoconcept-web/].

Available from version 7.2 of the Geoconcept GIS and later versions, this publishing function offers the option to drop a map on a server, update the map of one or more existing projects, or to create a new project.

The map publishing filepath is defined under *Publish/Map/Publish path directory* in the administration Settings.

Redirection

To force redirection of URLs, replace the *geoconcept-web* string with the name of your application in the **“<GEOCONCEPT_WEB_HOME>”\tomcat\webapps\ROOT\index.jsp** file.

```
<% response.sendRedirect("/geoconcept-web"); %>
```

Using the cache

Geoconcept Web uses a cache mechanism at several levels in order to optimize display performances. For more detail on this, consult the Cache section chapter.

Advanced parameter settings

When the application is deployed, a certain number of parameters are automatically created and saved in the database, in the gw_parameters table.

To consult the complete list of all the parameters available in the application, please refer to the Administration / Parameters / Advanced parameters.

Generating tiles

Mandatory settings

The following three parameter settings are required for the application to operate correctly:

- geographics.server.gcisServer: local or url of a distant server, for example: *http://my-pc:81/geoconcept-web/gc* in the following format *http/s://<SERVER/IP>:<PORT>/<APPLICATION>/gc*
- geographics.server.tileServer: /name_of_the_geoconcept_web_portal/maps,
- geographics.server.mapServer: /name_of_the_geoconcept_web_portal/gcservlet.

Optional parameters

It is possible to edit the number of cores used by the tiling application by editing the **"<GEOCONCEPT_WEB_HOME>"\gc\jee\gc\conf\service.xml** file

The default value

```
executor/max-threads = auto
```

can be modified, for example, as below

```
executor/max-threads = 2
```

Activating WMS and WMTS

To authorise the distribution of layers in WMS or WMTS formats, you will need to activate the option. Two methods are possible:

- Modify the following parameters:
  - **services.wms.activate** : the value must be set to true,
  - **services.wmts.activate** : the value must be set to true,
- Or, activate the parameters via the services control panel. The latter is found under Administration then Tools ‣ Services .

To consult WMS/WMTS, use the following URLs:

WMS GetCapabilities: http://<server>/geoconcept-web/wms?request=GetCapabilities

WMTS GetCapabilities: http://<server>/geoconcept-web/wmts/1.0.0/WmtsCapabilities.xml

Advanced geocoding

The administration module allows you to define some of the parameter settings for the Geoconcept Web geocoding module via the UGC component.

The parameters involved for the geocoding are as follows:

- **`la datasource`**
- **`le nombre de candidats max`**
- **`la note minimale pour présenter un candidat`**
- **`la distance de décalage orthogonale`**

These parameters are accessible in the global parameter **`geocoder`** in the Parameters menu in the Administration tab.

The **`datasource`** parameter must have as its assigned value the name of the geocoding referential stored in the “<DATA_HOME>”\data\maps folder.

All the parameters available in UGC are not listed in this administration interface. The file called *`service.xml`* serves to modify the parameters for UGC directly. This file is present in your UGC/conf installation directory.

The parameters that can be modified are listed in the section of the Universal Geocoder Server guide called “Fine tuning the datasource configuration”.

To use several referencials geocoding simultaneously consult the World geocoding section.

Advanced autocompletion

Parameters must also be set in the case where an autocomplete web service is used. There are two of these parameters:

- **`geocoder.autocomplete.cacheSizeMB`** : this defines the size of the RAM disk space allocated to ongoing loading of reference files. The memory is therefore in constant use and not available for other applications.

```
geocoder.autocomplete.cacheSizeMB=300
```

- **`geocoder.autocomplete.datasource`** : this defines the directory in which the reference files are stored. Take care to only indicate the hierarchical tree below the *autocomp* folder. In our example, the value of the parameter is Auto_completion, for the **`“<DATA_HOME>”\data\maps\autocomp\`** folder.

```
geocoder.autocomplete.datasource=Auto_completion
```

The `cacheSizeMB` parameter allocates a proportion of the RAM to the loading of reference files. The files will be loaded in increasing order (classification 1 first: address.1, then address.2, …). The files in classification 1 contain data that have been chosen as principal data items (Paris, Lyon, Marseille for example). The files are loaded as a function of the size allocated. For example, for the whole of France, loading all the reference files requires an allocation of more than 7 Gbytes of RAM.

To construct the autocompletion files, refer to the generation of autompletion files section.

Advanced route calculation

To use the Geoconcept Web SmartRouting component, you need to specify the name of the graph or network that will be used for route calculation via the SmartRouting component.

Other parameters can be assigned values to refine the utilisation of SmartRouting. Below is a list of modifiable parameters:

- `iti.graphname` : mandatory. The network must be stored in "<DATA_HOME>"\data\maps directory,
- `iti.cost` : optional: *time* or *distance*. This is the route calculation optimisation criterion,
- `iti.jndiName` : mandatory. The value is, by default: *java:comp/env/geoconcept/smartrouting/default*,
- `iti.srsOut` : optional. This will be the output coordinates system. The values are WGS 84, MAP (projection system for the map defined in the parameter `geographics.map`) or the EPSG code.
- `iti.graphSnapDistance` : optional (in meters): snap-to-graph distance,
- `iti.graphSnapSpeedMPerS` : optional (in meters per second): snap-to-graph speed
- `iti.referenceLevel` : optional (integer between 1 and 5): restriction on utilisation of grades of roads,
- `iti.rejectFlags` : optional (exclusions separated by commas): list of exclusions on types of routes (example: Toll,Bridge,Pedestrian).
- `iti.useMetaGraph` : optional(*true* or *false*): utilisation of meta-graphs. The default value is set to *false*.
- `iti.speedProfile` : optional. Speed profile

The graphname parameter must then be completed with the name of the graph to be exploited, with a name that does not have the .siti file extension:

It is also necessary to assign a route calculation method, selecting from the following options:

- `time` or 0: the fastest route via the road network (graph),
- `distance` or 1: the shortest route via the road network (graph),

To use several graphs simultaneously, consult the Road graphs section.

Adding new widgets

The development of new widgets so they can be integrated within the Composer of the Designer is described in the (cf. Kit de développement) section. The `easy.widgets.path` parameter (present by default, and its value can be modified) serves to specify the filepath towards the directory in which the new .jar file containing the new widgets will be placed.

Licence renewal

A Geoconcept web license is valid for the length of time cited in the license activation. If the validity date has passed, activation is no longer possible and the license has expired. In this case, you will need to reactivate the license.

Expired license warning message

When you click on the Expired license message, the following window opens:

Managing licenses

Here you will see the serial number starting with GCWB as well as the machine identification key.

To obtain your new activation key, visit the https://fr.geoconcept.com/activate site, and note down the serial number and machine identification key.

Following validation of these information items, a new activation key is available and can be copied in the place of the old key.

You will then need to click on Update license information to save and store these new details.

Logging off and then back on again is required to validate the process.

Manual installation

This chapter is aimed at advanced users who want to configure Geoconcept Web specifically for their own use, either because some of the components are already installed on the target server, or because they have a particular architecture that requires special treatment.

Application server

The Geoconcept Web installer installs and configures version 8 of Tomcat. You can, nonetheless, use a Tomcat that is already present on the server, or install it separately from the Geoconcept Web installer.

Installation

We recommend using version 8 of the Apache Tomcat server. You can download this version from the following site: http://tomcat.apache.org/.

Next, run the installer and follow the various steps described. The installation directory is not critical, but it will be necessary to keep the location recorded somewhere for the next part of the installation of the application. It will be called <TOMCAT_HOME> in the remainder of this document.

The installer requests an administration password (optional). If you would like to use a password, choose one you can remember, and store it carefully somewhere. Associate the value 80 for the port used by the Apache Tomcat service (if this port is already used, choose another one).

Take care when using several Apache Tomcats on the server: it will be necessary to check, and if need be modify, in the *server.xml* file, the various ports used by the application to ensure they are not in conflict with one another. Be sure to check the following lines:

- *<Server port="8005" shutdown="SHUTDOWN">*
- *<Connector port="8009" protocol="AJP/1.3" redirectPort="443" />*

Next, it will ask if you wish to install the software as a service. Reply in the affirmative to this question.

At the end of the installation the Tomcat service has been installed.

Configuration

If Tomcat is already installed, it will be necessary to modify the *server.xml* file.

In *<GlobalNamingResources>* add:

```
<!--GC-->
<Resource
name="geoconcept/gc/default"
type="com.geoconcept.gc.provider.Provider"
scope="Shareable"
description="GC connection factory -local dll"
auth="Container"
RootDirectory="C:\Program Files\GEOCONCEPT\Geoconcept Web\gc\jee\gc"
factory="com.geoconcept.gc.connect.tomcat.ConnectionFactory"
ConnectionMode="LocalDll"
/>

<!--UGC-->
<Resource
        name="geoconcept/ugc/default"
        type="com.geoconcept.ugc.service.CodingProvider"
        scope="Shareable"
        description="UGC connection factory -local dll"
        auth="Container"
        RootDirectory="C:\Program Files\GEOCONCEPT\Geoconcept Web\ugc\jee\ugc"
        RefTablesDirectory="C:\Geoconcept Web\data\maps"
        factory="com.geoconcept.ugc.connect.tomcat.ConnectionFactory"
        ConnectionMode="LocalDll"
/>

<!--SmartRouting-->
<Resource
        name="geoconcept/smartrouting/default"
        type="com.geoconcept.smartrouting.Provider"
        scope="Shareable"
```

```
                description="Smartrouting connection factory -local dll"
                auth="Container"
                RootDirectory="C:\Program Files\GEOCONCEPT\Geoconcept Web\smartrouting\jee\smartrouting"
                GraphsDirectory="C:\Geoconcept Web\data\maps"
                factory="com.geoconcept.smartrouting.connect.tomcat.ConnectionFactory"
                ConnectionMode="LocalDll"
        />
```

Go with the Windows file explorer into the <TOMCAT_HOME>/bin directory and run the «Tomcat8w.exe» executable (in the presence of version 8 of Apache Tomcat). This executable is the console of the Apache Tomcat application server.

The Start button is greyed out when the server is actually executing. In this case, click on the Stop button to stop it.

Position the Startup type option on Automatic, and click on the Apply button. Next, go into the Java tab, and in the *'Java options*' box add the lines:

```
-Xmx1024m
-Xms256m
```

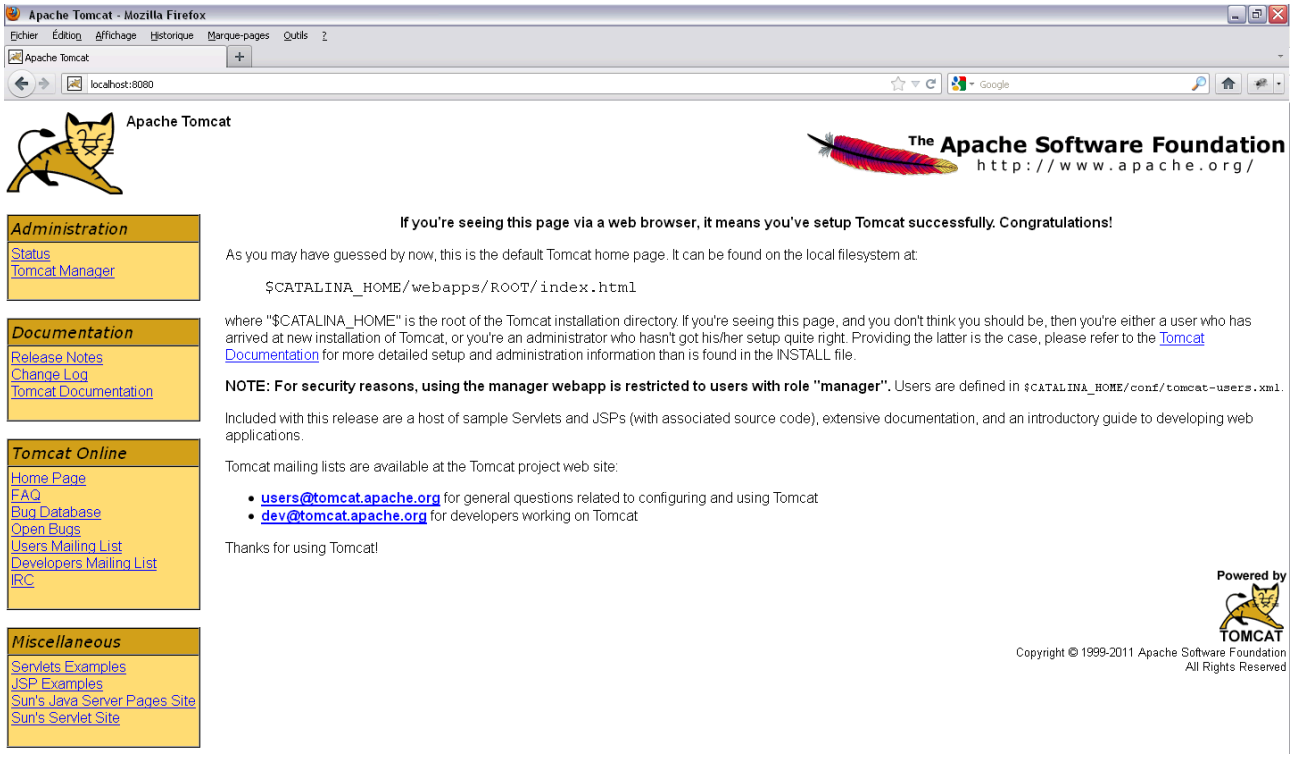
i. and click on the Apply button.

Return to the General tab and click on Start to start the Tomcat server.

In order to verify whether the installation has been correctly performed, open a web browser and type in the following URL: http://localhost:numero_port_utilise (for example: http://localhost:80 or http://localhost).

You should obtain the equivalent Tomcat home page.

Tomcat configuration result



Database

In order to function, a database has to be accessible to the web application so the latter can store its parameters there. You will be able to use a database that is already deployed within your work environment (locally or on the network). If no database is available, it will be necessary to install one.

Standard databases can be used in the context of an installation of our solution. We will describe the utilisation of the MySQL, PostgreSQL, SQL Server and Oracle databases in detail. Utilisations of other databases are described briefly: the procedure remains identical in each case (creation of a schema and of a user having all the rights associated to this schema, addition of the JDBC driver) with the characteristics specific to each database.

Note that an embedded database system (HSQLDB) is also described. With this system, installing a DBMS locally will not be necessary. The data will be stored in files created on the disk.

The HSQLDB system can be used if no advanced database management is required, for example, where a deployment is set up exclusively for the purpose of using Geoconcept Web web services.

We strongly advise against using HSQLDB to create portals from the solution's Designer tab.

MySQL

Installing the database

Version 8.0 is the current version of MySQL. It can be downloaded at the following address: https://dev.mysql.com/downloads/mysql/ .

In the list of downloadable products, select and download the Windows MSI Installer file appropriate for your computer (32-bit or 64-bit): this file is of the mysql-n°de-version-win32.msi type. Once downloaded, double-click on the downloaded file to run the installation and then follow the instructions that guide you through the various steps of the installation.

At the end of the guided procedure in the wizard, check the «Launch the MySQL Instance Configuration Wizard» check-box and then assign values to the various steps in the procedure with the following options:

- Developer Machine,
- Multifunctional database,
- Decision Support (DSS)/OLAP,
- Enable TCP/IP Networking with port number 3306,
- Enable Strict Mode,
- Standard Character Set,
- Install As Windows Service with service name “MySQL”

- Check the “Include Bin Directory in Windows PATH” check-box,
- Give a password (make sure you store this password for future reference) and then check the “Modify Security Settings: Enable root access from remote machine” check-box.

> By default, the character set on installation of MySQL is *Latin1*. To use a unicode character set, you will need to modify the *my.ini* file:

```
default-character-set=utf8
character-set-server=utf8
```

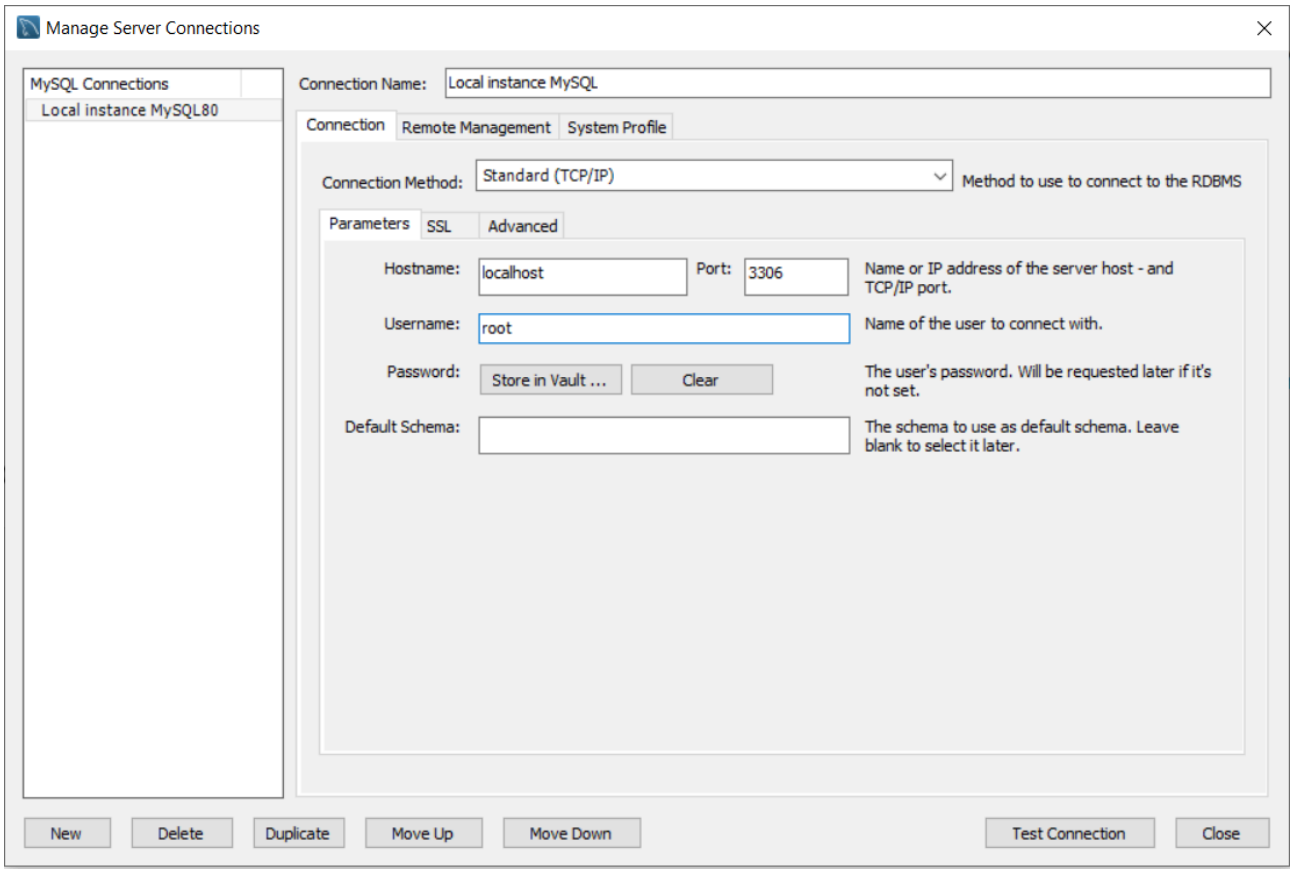
When the installation is complete, it is also a good idea to install the add-on tools as it will make manipulating the database a lot easier: the MySQL Workbench is well-suited to this task. It can be downloaded from the following address: https://dev.mysql.com/downloads/workbench/.

Having downloaded the Windows MSI Installer file, double-click on the file to run the installation.

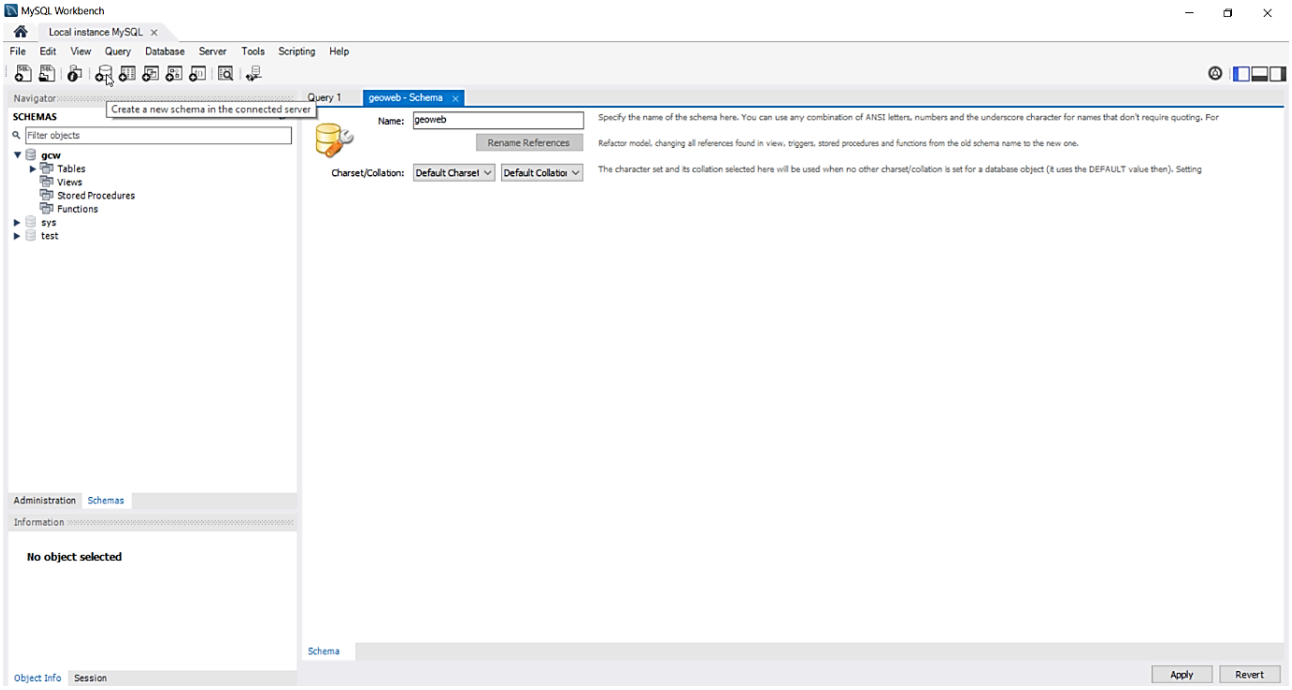
Creating the schematic and a user

Once these operations have been executed, open the MySQL Workbench. A link to the database can be specified via the SQL Development menu. You can use the Test Connection button to verify your parameters:

Links manager via the MySQL Workbench (version 8.0)



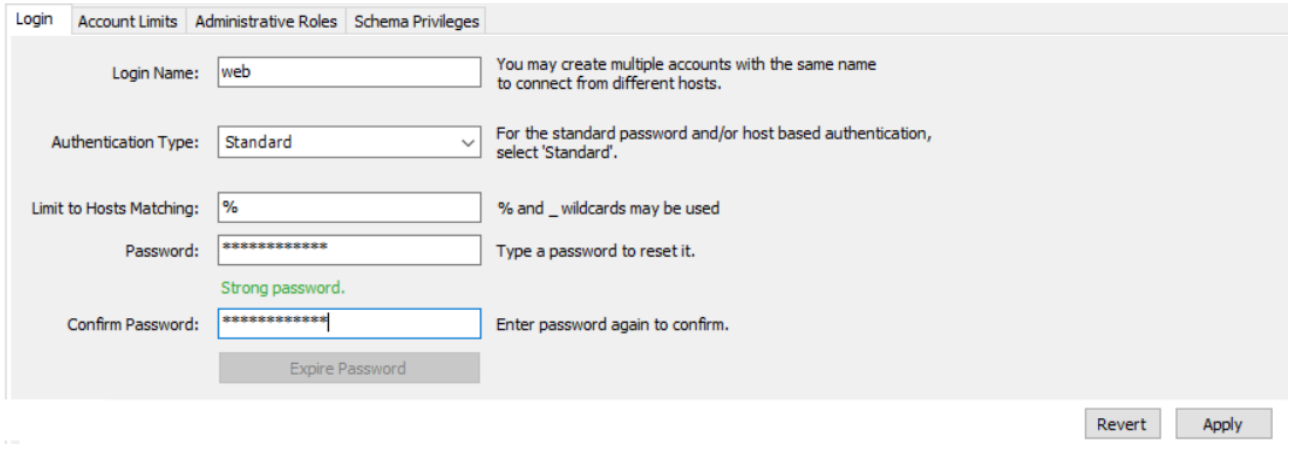
Creating a schema under MySQL Workbench (version 8.0)



Double-clicking on this connection opens a SQL Editor window. In the left-hand column labelled Object Browser, you need to create a new schema (right-click in the window) called in this document **geoweb**.

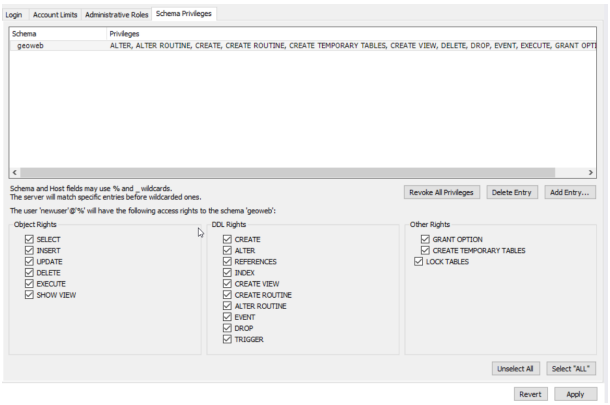
Open another link also, Admin via the Server Administration menu (to the right of the Workbench). In the Accounts tab, and then in Server Access Management tab, create a new user with a password using the Add account button (in this document, we will take as an example a web user with the password *web*). Use the acronym "%" in the "Limit Connectivity to Hosts Matching" text zone.

Creating a user



In the Schema Privileges menu, assign all the rights to this web user on the geoweb schema using the Add Entry… functionality, and then following the schema shown below:

Assigning rights to the user



Next, select all the rights using the Select “ALL” button, and then Save Changes.

Adding the JDBC driver

It will be necessary to download the JDBC driver from this address: https://dev.mysql.com/downloads/connector/j/ in order to authorise the Tomcat datasources to access the MySQL server.

Once the archive has been unzipped, copy-paste the driver (the .jar file only) into the <TOMCAT_HOME>\lib\ directory.

The architecture of the context file can be consulted in the Application deployment section of the documentation.

PostgreSQL

Installing the database server

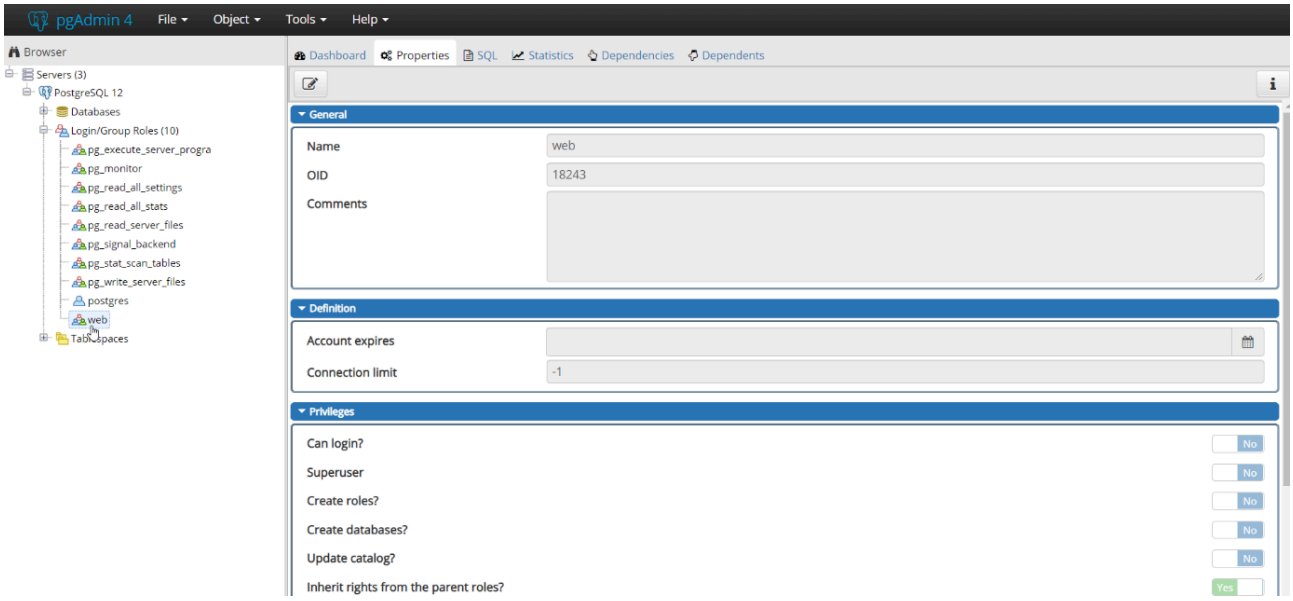
The postgreSQL database can be downloaded here: https://www.postgresql.com/download/. Follow the guided installation procedure. You can also refer to the documentation on-line at this address: http://www.postgresql.org/docs/.

We recommend installing the PostgreSQL database with a pgAdmin 4 client (for Windows). Execute pgAdmin 4, and then connect to the database with administrator rights.

Creating the database

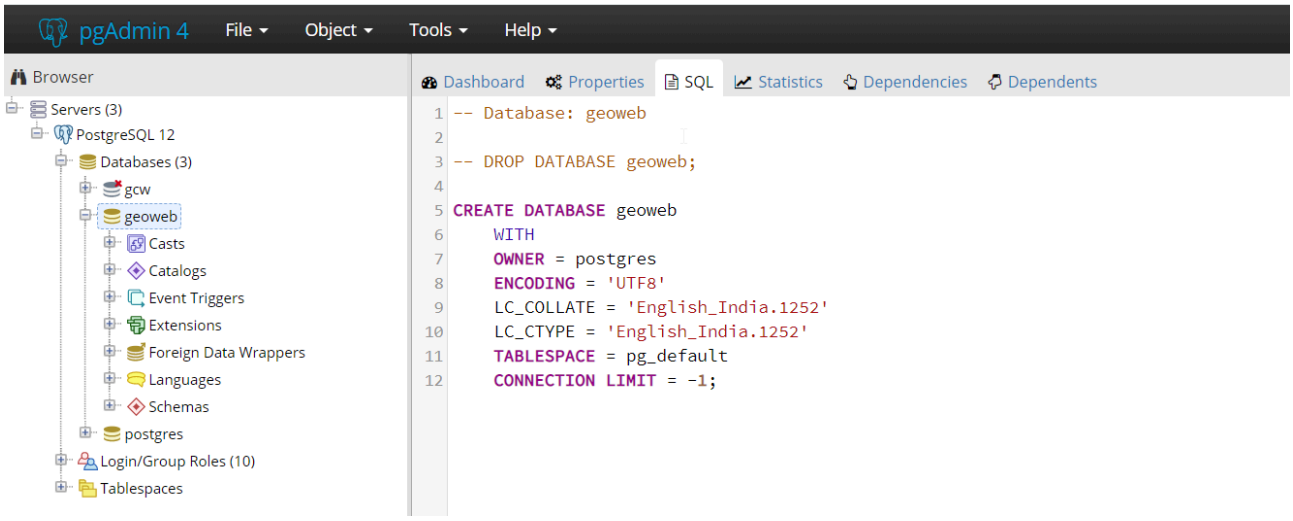
In this document, we create a web user, with “web” as password. This password will be used subsequently in the configuration of the application server.

Creating the user



Create a new database called “geoweb” (right-click on “Databases” in the hierarchical tree and then “Add a database”) using UTF-8 encryption and assigning it to the “web” user in the `Owner` . Use the `postgres` model if necessary. Assign all the rights to this user on this geoweb database in the `Rights` tab. Note that the schema named “public” is created automatically.

Creating the schema



Adding the JDBC driver

The JDBC driver can be found at the following address: https://jdbc.postgresql.org/download.html/.

The architecture of the context file can be consulted in the Application deployment section of the documentation.

From a JVM 1.6, you need to choose the JDBC4 driver.

Unzip the downloaded file, and then copy-paste the JDBC driver (the .jar file only) into the "<TOMCAT_HOME>"/lib directory to authorise the Tomcat datasources to access the PostgreSQL server.

Authentication

If necessary, modify the configuration file pg_hba.conf that allows you to have remote access to the PostgreSQL server, using the instructions on-line: https://www.postgresql.org/docs/12/client-authentication.html.

SQL Server

In the framework of utilising Microsoft's SQL Server database manager, the version shown here is SQL Server 2019 (SQLServer Express 2019 RC and SQL Server Manager Studio Express).

The version can be downloaded at: https://www.microsoft.com/en-in/sql-server/sql-server-downloads .

In the same way as described for the utilisation of MySQL, you will need to have a user (web, for example) that will be used in the framework of the application, and possess the full set of rights on the database created for the web application.

(fr) A l'utilisation pour une table avec des données géographiques, il peut s'avérer nécessaire de faire les opérations suivantes :

- (fr) mettre le SRID de cette table à 0 avec la commande suivante :

```
update <table> set <colonne geom>.STSrid=0;
```

- (fr) Créer une table de métadata géométrie pour identifier le type de géometrie

```
CREATE TABLE <TABLE_NAME>(
    [f_table_catalog] [nvarchar](50) NULL,
    [f_table_schema] [nvarchar](50) NULL,
    [f_table_name] [nvarchar](100) NULL,
    [f_geometry_column] [nvarchar](50) NULL,
    [coord_dimension] [int] NULL,
    [srid] [int] NULL,
    [type] [nvarchar](50) NULL
)
```

- (fr) Ajouter le nom de la table de métadata géométrie dans les paramètres avancées de la source de données (Geometry metadata table)
- (fr) Ajouter métadata géométrie pour le vecteur (SRID doit être null null ou 0)

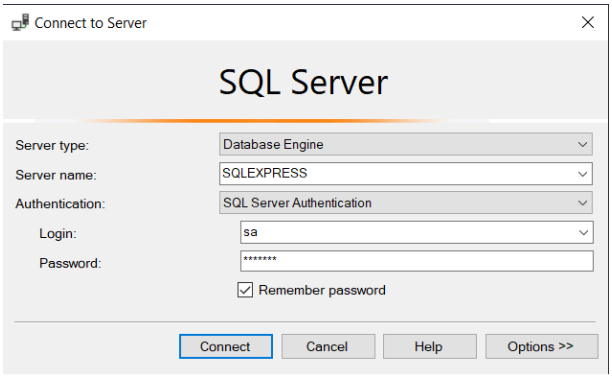
Installing the database

Having first downloaded and started the installer, two steps must be respected during the installation of SQL Server 2019:

- the creation of an Admin SQL Server account. In our example, the identifier is: `sa` and the password: `manager`.
- specify the name that the SQL Server instance will have in the Windows Services menu. Here, for example, the instance will be called SQLEXPRESS.

Once these elements have been configured and the installation terminated, run SQL Server Manager Studio Express by connecting as follows:

Connecting to SQL Server for the first time



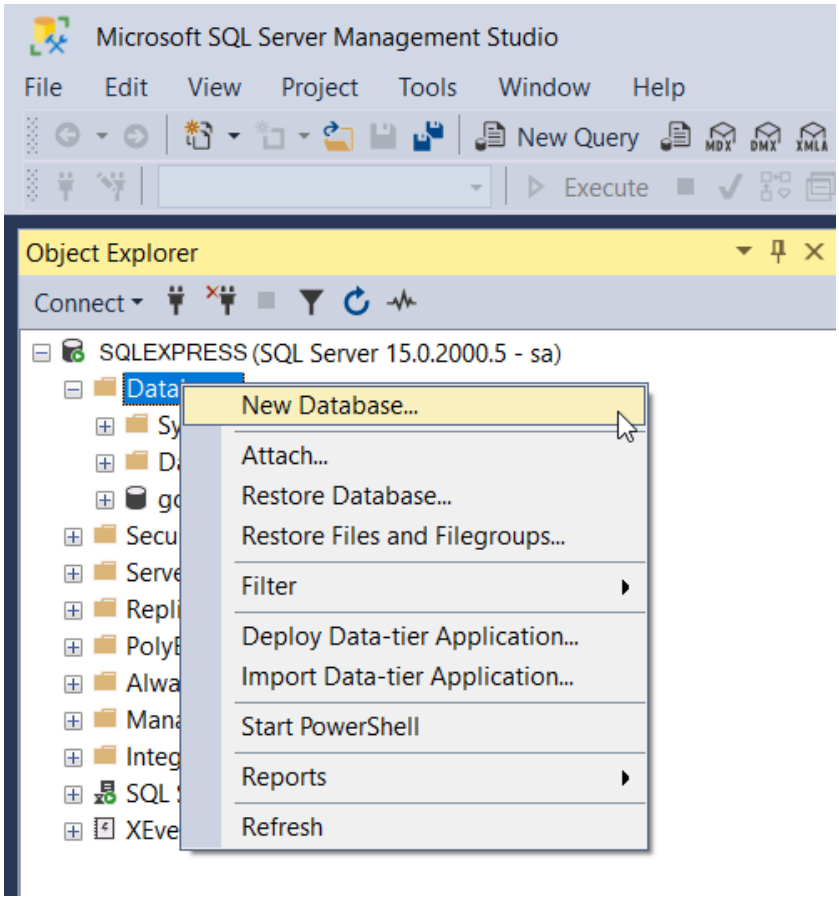
Indicate the server name: name-of-the-machine (or IP address)\name-of-the-instance. Then, choose `SQL Server Authentication` as the authentication mode. Finally, indicate the identifier and the password defined during the installation of the DBMS (for example: sa / manager).

Creating the database

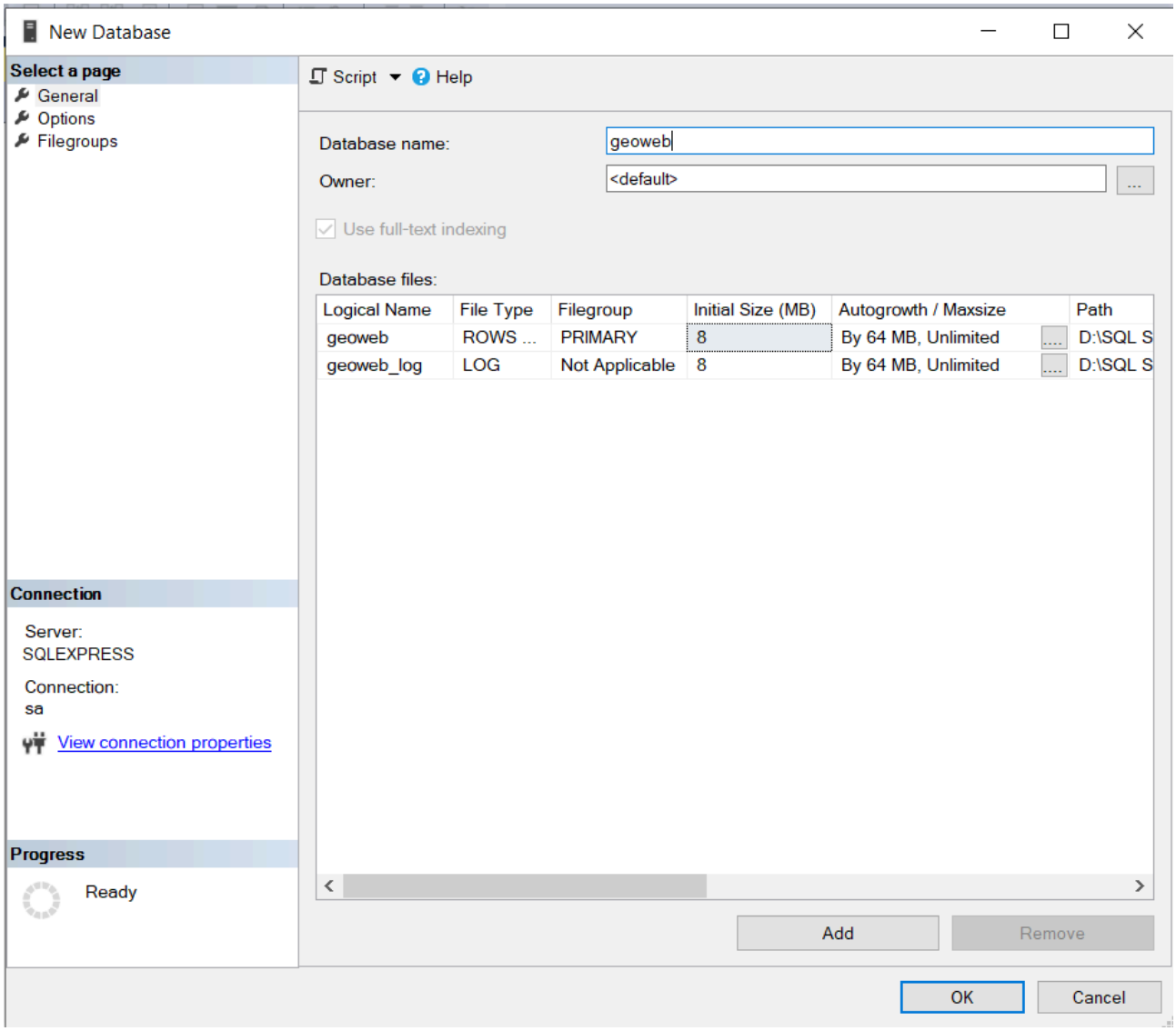
Once connected, the next step relates to the creation of a database that will be associated to the application, this being essential for its deployment and correct functioning. In this example, the database will be called "geoweb".

Right-click on the `database` directory, and then select `New database`.

Creating the new "geoweb" database (1)

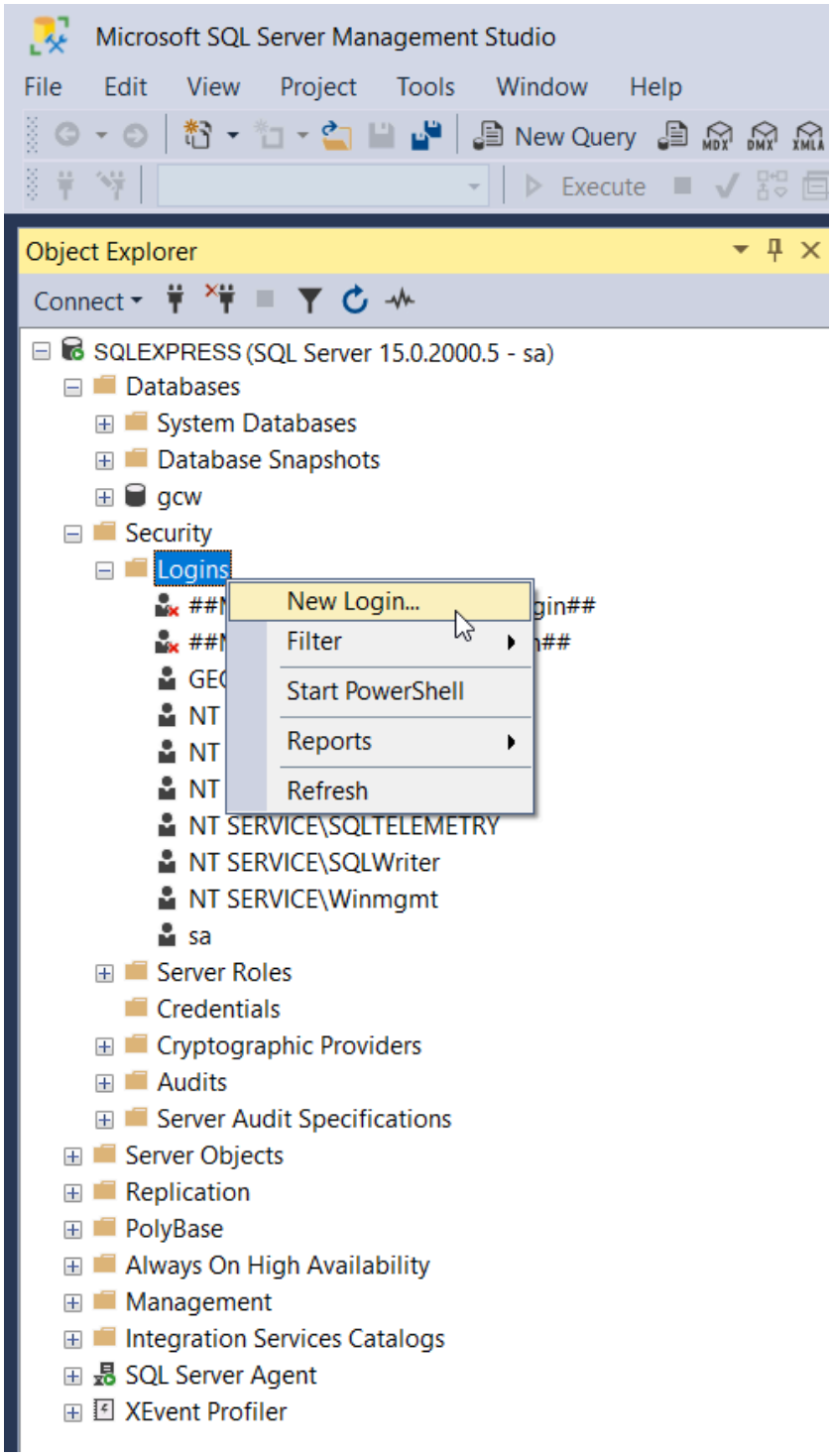


Creating the new "geoweb" database (2)

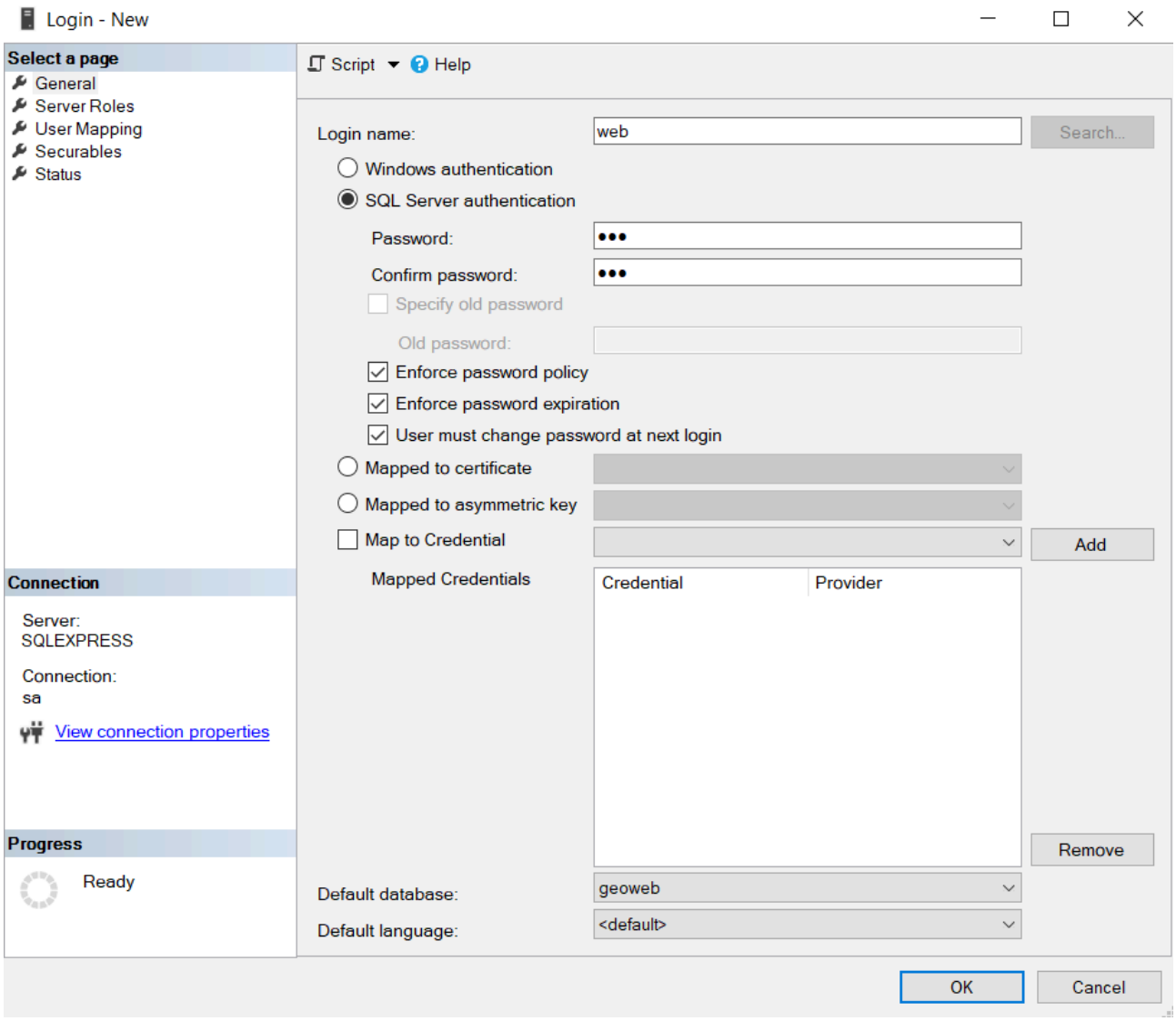


Then, in Security , create a Connection giving an access name / username, for example web , and a password web . Take care to specify that it is a SQL Server Authentification . Specify also that the default database is "geoweb", the base created earlier.

Creating the "web" user (1)

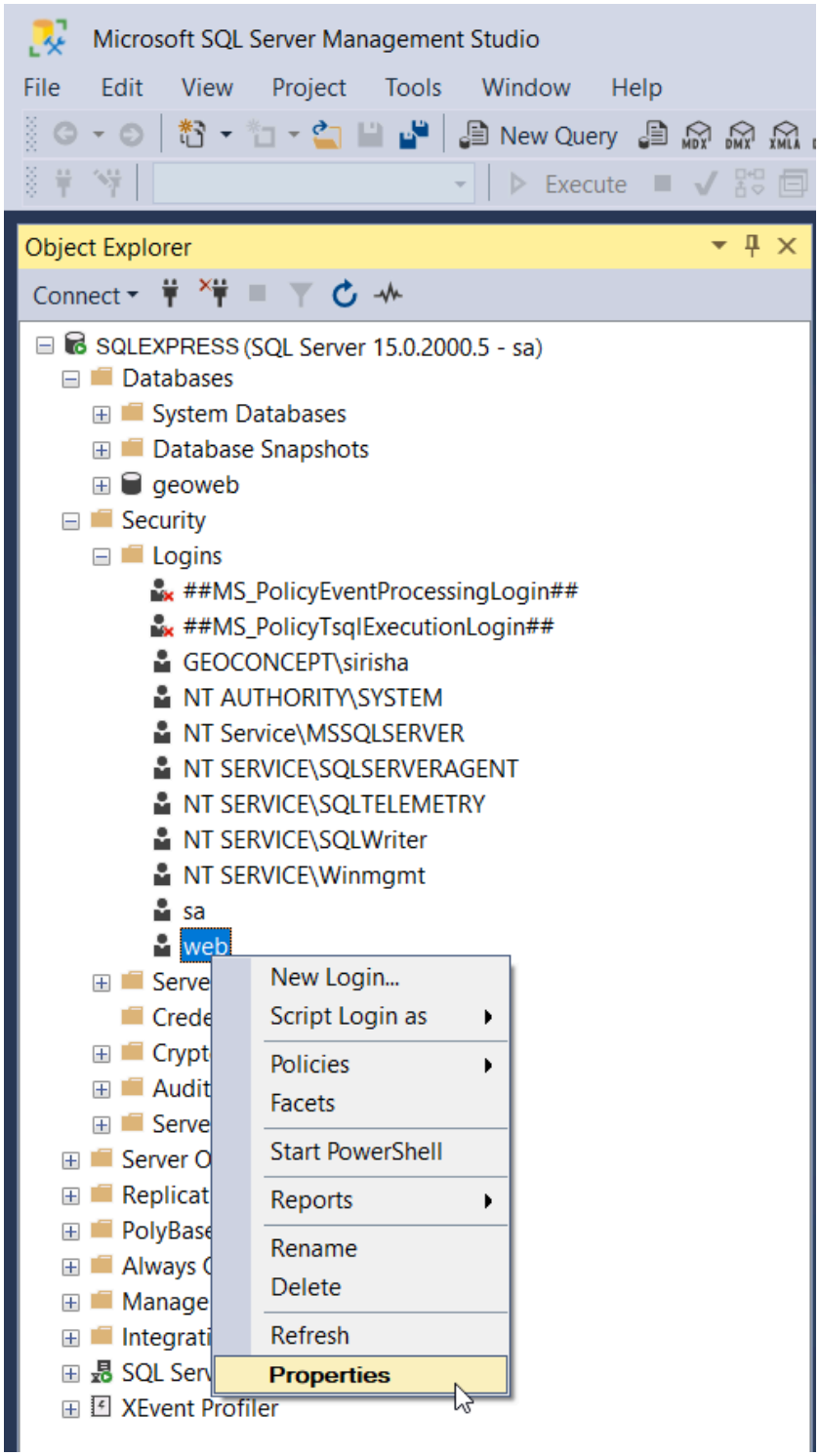


Creating the "web" user (2)



Next, create the mapping between the user and the database. Click on Security , then Connection , and right-click on the user name created. Click finally on Properties .

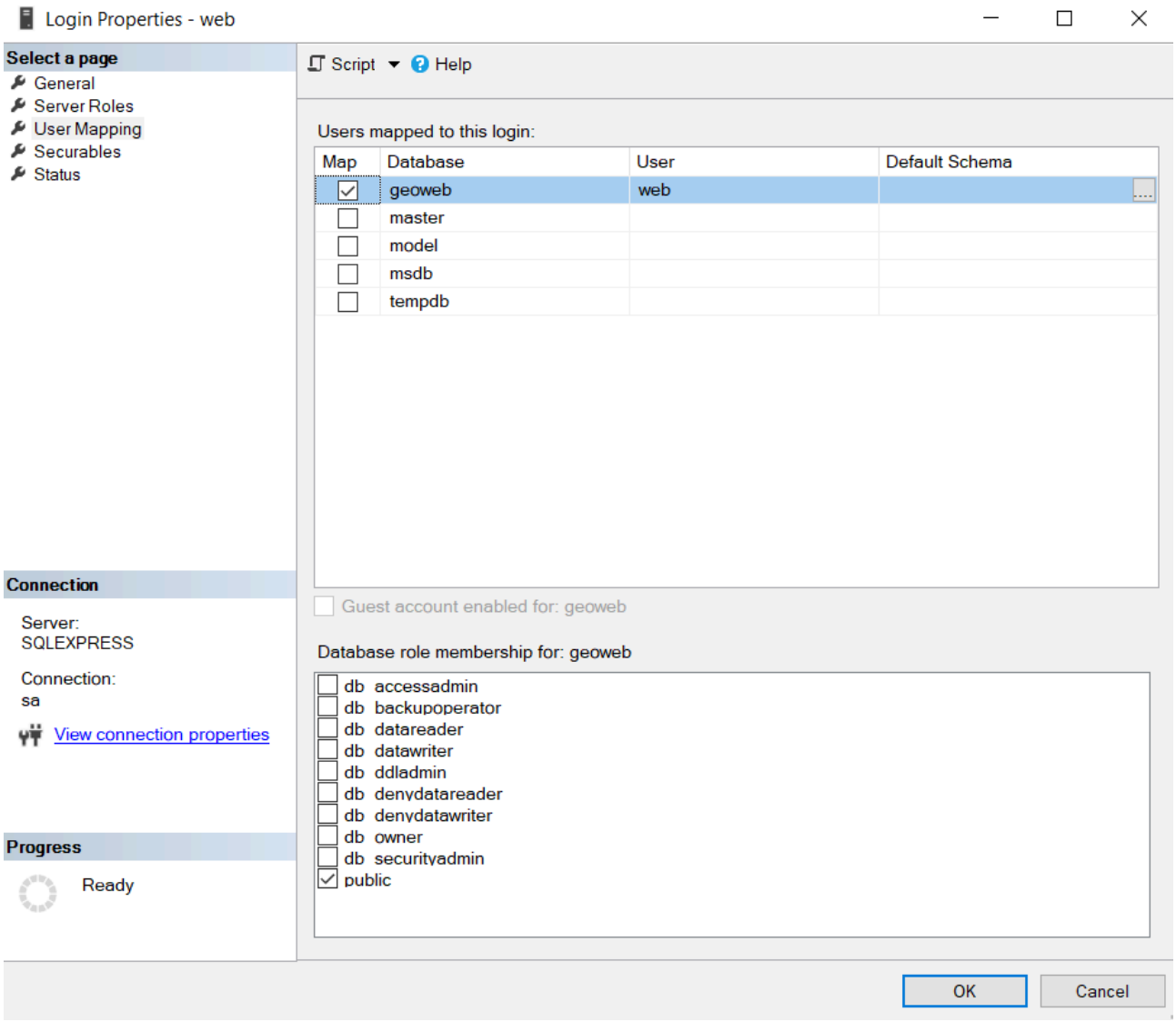
User properties for defining the mapping



In the connection properties / user, click on `User mapping` and check the following options:

- associate the "geoweb" database to the user;
- check that the default schema indicates the `dbo` value;
- database role ownership, check: "db_owner" and leave "public" checked;

User mappings

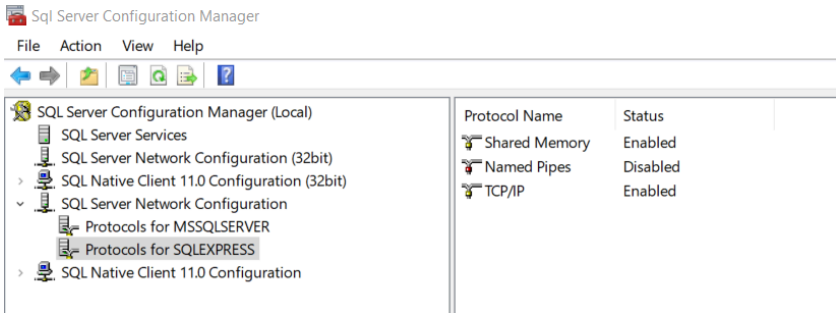


Configuration of SQL Server

Once the database, the user and the mappings have all been configured, it will be necessary to open SQL Server Configuration Manager (configuration tool) in order to configure the SQL Server 2019 network connections.

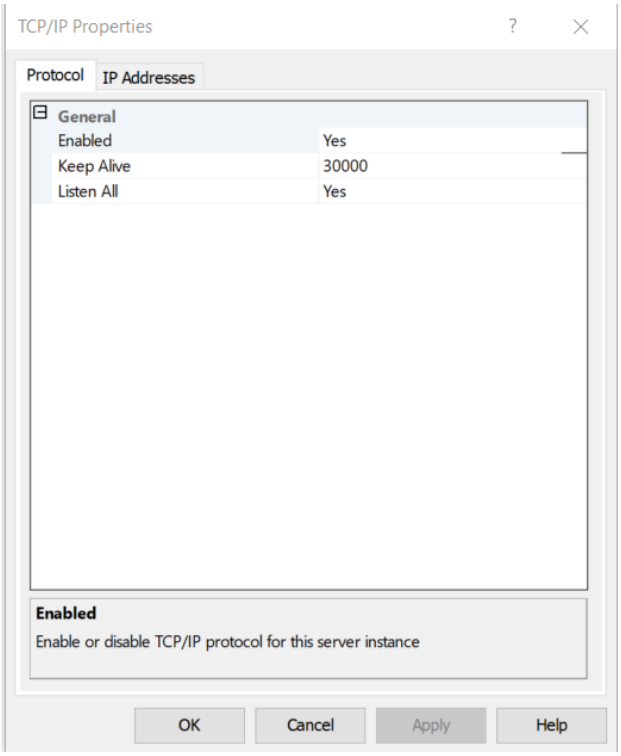
When the configuration tool has opened, click on `Configuring the SQL Server network`, select `Protocols for SQLEXPRESS` then double-click on `TCP/IP`.

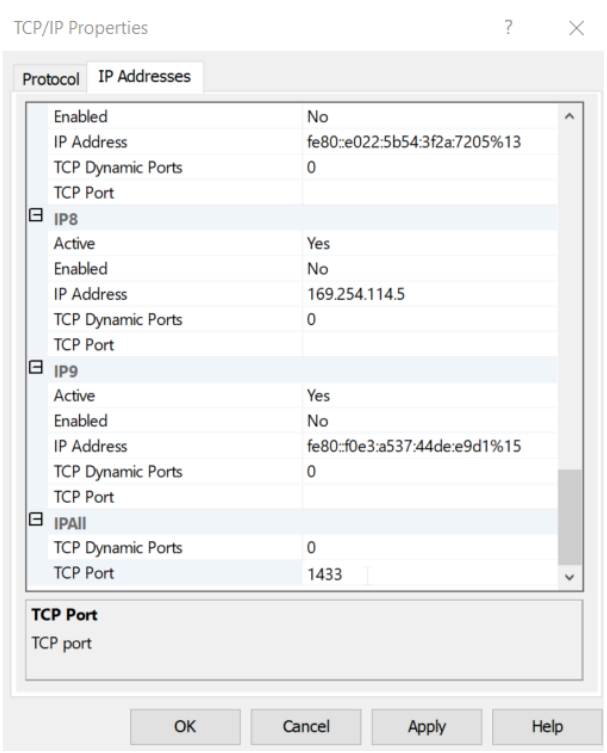
SQL Server Configuration Manager control panel



In the TCP/IP menu, and the protocol tab, switch the Activated parameter to Yes. Then, in the Adresses IP tab, in the IPAll dialogue at the bottom of the window, enter a value of 1433 for TCP Port and do not assign any value to the Dynamic TCP Ports parameter.

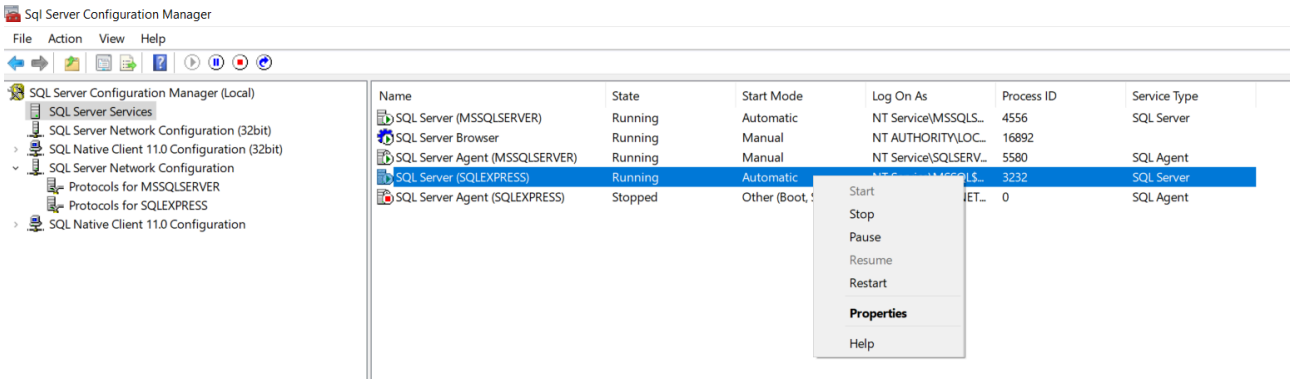
TCP/IP connection settings





When these parameters are validated, return to the left-hand menu and click on Services SQL Server; a SQL Server list is displayed in the menu's right-hand pane. Right-click on SQL Server (SQLEXPRESS) and finally click on Restart.

Restarting the "SQL EXPRESS" instance



Adding the JDBC connector and the XML configuration file

After configuring SQL Server 2008, you will have to store the JDBC driver in the “<TOMCAT_HOME>”/lib directory of the Tomcat application server.

The connector is accessible at the following address: https://docs.microsoft.com/en-us/sql/connect/jdbc/microsoft-jdbc-driver-for-sql-server?view=sql-server-ver15 .

> The version of the connector is only efficient if the Java version is compatible with (https://docs.microsoft.com/en-us/sql/connect/jdbc/system-requirements-for-the-jdbc-driver?view=sql-server-ver15). The connector transmitted is functional with versions of JVM later than version 5.

For everything to be operational, you should combine deployment of the new .war with a new xml file specific to the joint utilisation of the Designer and SQL Server (to be placed in the “<TOMCAT_HOME>”/conf/Catalina/localhost of the Apache Tomcat application server).

The architecture of this context file can be consulted in the “Deployment of the application” section of the documentation.

> Take care to check that the SQL Server Browser services, and the SQL Server (SQLEXPRESS) are activated:

Oracle

It will be necessary to create a specific user to be used by the Geoconcept Web application with the appropriate rights. Here is an example script for the creation of a web user for an Oracle database:

Create a user

```
define username = web
define userpwd = web

drop user &username cascade;
```

```
create user &username identified by &userpwd default tablespace users;
alter user &username quota unlimited on users;
grant create session to &username;
grant create table to &username;
grant create view to &username;
grant create sequence to &username;
```

The database schema will be initialised by the application once the Geoconcept Web installation is terminated.

Choose the JDBC driver corresponding to your version of Oracle. It can be found at the following address: https://www.oracle.com/database/technologies/appdev/jdbc-downloads.html. The driver is of the ojdbcXX.jar type (where XX corresponds to the number of the ojdbc driver version).

The architecture of the context file can be consulted in the Application Deployment section of the documentation.

When using a version of Oracle Express, the value to indicate for the schema is “XE”.

Note that the Oracle connection or login string is not identical depending on the method (SID or Service Name) used:

- SID : url="jdbc:oracle:thin:@localhost:1521:SCHEMA_BASE"
- Service Name : url="jdbc:oracle:thin:@//localhost:1521/SCHEMA_BASE"

A l’utilisation pour une table avec des données géographiques, il peut s’avérer nécessaire de faire les opérations suivantes :

- (fr) Créer une table de métadata géométries comme détaillée dans le manuel geotools [https://docs.geotools.org/latest/userguide/library/jdbc/oracle.html]

```
CREATE TABLE GEOMETRY_COLUMNS(
   F_TABLE_SCHEMA VARCHAR(30) NOT NULL,
   F_TABLE_NAME VARCHAR(30) NOT NULL,
   F_GEOMETRY_COLUMN VARCHAR(30) NOT NULL,
   COORD_DIMENSION INTEGER,
   SRID INTEGER NOT NULL,
   TYPE VARCHAR(30) NOT NULL,
   UNIQUE(F_TABLE_SCHEMA, F_TABLE_NAME, F_GEOMETRY_COLUMN),
   CHECK(TYPE IN ('POINT','LINE', 'POLYGON', 'COLLECTION', 'MULTIPOINT', 'MULTILINE',
 'MULTIPOLYGON', 'GEOMETRY') ));
```

- (fr) Ajouter le nom de la table de métadata géométries dans les paramètres avancées de la source de données (Geometry metadata table)
- (fr) Ajouter métadata géométrie pour le vecteur

Geoconcept Web Map

Geoconcept Web Map is the mapping display and tile drawing component developed around the Geoconcept Geographic Information System. From version 6.0 upwards, this display engine is naturally multi-thread (for optimum performances) and multi-instances without any specific configuration.

It is fully integrated in Geoconcept Web and no longer requires utilisation of a specific Windows server, being managed via the Administration / Tools / Map handling page.

JEE UGC

Universal Geocoder JEE is the Java component of the Universal Geocoder Server that is necessary when setting up a geocoding web service in Geoconcept Web, and also for the purpose of using the geocoding functionality in the portals. All other web applications having a geocoding functionality are also concerned.

In the case of a utilisation from Geoconcept Web, only the JEE component must mandatorily be installed (the .NET and Cmdline components are not necessary). It will suffice to follow the steps in the installer to install the components needed for the correct functioning of the JEE UGC.

JAVA libraries

The Geoconcept Web installer installs the universal Geocoder libraries in “<GEOCONCEPT_WEB_HOME>”/tomcat/lib, with “<GEOCONCEPT_WEB_HOME>” the filepath for installing Geoconcept Web. These .jar files are the following:

- activation.jar
- javax-ressource.jar
- jdom.jar
- log4j-1.2.16.jar
- ugc.jar

Editing the server.xml file

In the case of a manual installation, you will need to indicate to the application server where the JEE UGC application is to be found. Using any standard text editor, you can edit the *server.xml* file present in a directory with a name similar to “<TOMCAT_HOME>”\conf\,

Within the GlobalNamingResources tag, add the following lines of code:

```
        <!--UGC-->
        <Resource
                name="geoconcept/ugc/default"
                type="com.geoconcept.ugc.service.CodingProvider"
                scope="Shareable"
                description="UGC connection factory -local dll"
```

```
                auth="Container"
                RootDirectory="``<UGC_HOME>''"
                RefTablesDirectory="``<DATA_HOME>''\data\maps"
                factory="com.geoconcept.ugc.connect.tomcat.ConnectionFactory"
                ConnectionMode="LocalDll"
      />
```

The **UGC_HOME** and **DATA_HOME** character strings should be replaced with suitable filepaths.

The user also has the option to add the filepath to a directory that stores the reference tables:

```
RefTablesDirectory="D:\Data\TableRef"
```

ugc-admin application

This application tests that UGC JEE is operating correctly. To deploy it, you will need to:

- copy the **“<GEOCONCEPT_WEB_HOME>”\tools\admin\webapps\ugc-admin.war** file into the **“<GEOCONCEPT_WEB_HOME>”\tomcat\webapps** folder
- copy the **“<GEOCONCEPT_WEB_HOME>”\tools\admin\config\ugc-admin.xml** file into the **“<GEOCONCEPT_WEB_HOME>”\tomcat\conf\Catalina\localhost** folder

Open any Internet browser and type the following address: http://ServerName:HostNumber/ugc-admin

For example, in our example: http://localhost/ugc-admin.

In the administration tool, click on “Load datasource” and type in the name of the reference table: Loire (the example table located in the “<DATA_HOME>”\data\maps directory).

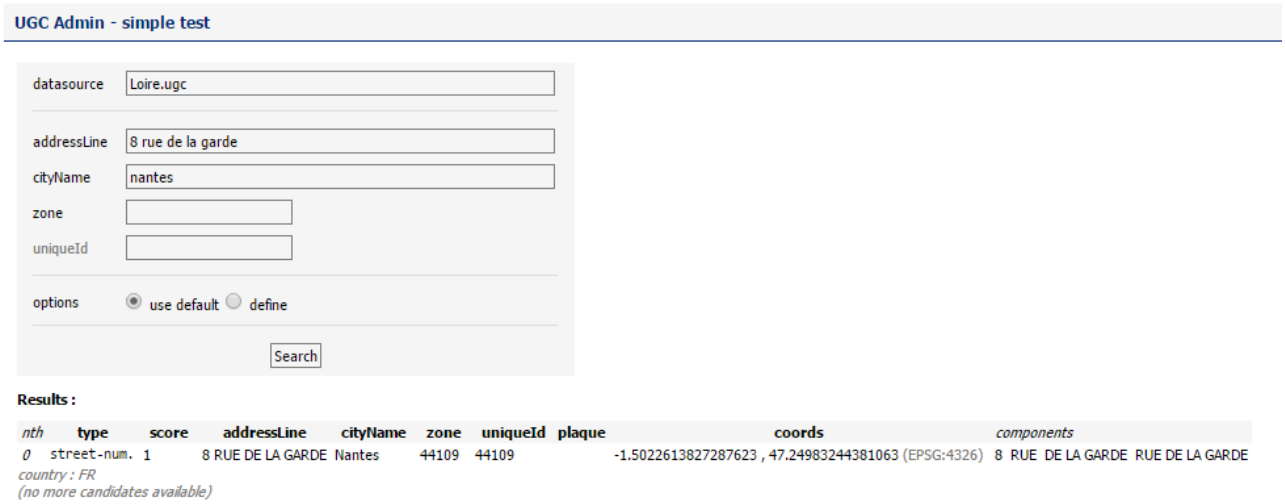
Click next on «Active datasources» and then on “test”. The default address is located in the 13th district of paris. Click on “Search”: a result should appear in the window located below the search form.

Configuring a datasource

Using the ugc-admin webapp, you can specify the configuration of your reference table. This option can be very useful when your reference table is not in the same coordinates system as the Geoconcept map, for example.

This new configuration can be applied by clicking on Datasource configuration, and then clicking on Create. You will then have to specify the EPSG code in the Coordinate system field so that the geocoder returns the results in the correct coordinates system.

Result of a Geocoding operation with a specific configuration: the result returned is in WGS 84



JEE SmartRouting

JEE SmartRouting is the Java component of SmartRouting Server, needed to set up web services for route calculation, search around..etc in the Geoconcept Web Platform, and also needed when using the route calculation functionality in the portals. All other web applications featuring a route calculation functionality are also concerned.

In the case of a configuration based on the Geoconcept Web Platform, it is essential to install the JEE component (however, note that the CmdLine component is not necessary). It will suffice to follow the installer steps to install the elements needed for the correct functioning of JEE SmartRouting.

JAVA libraries

The Geoconcept Web installer installs the JEE SmartRouting Server libraries under “GEOCONCET_WEB_HOME”\tomcat\lib, with “GEOCONCET_WEB_HOME” the installation filepath for Geoconcept Web. These .jar files are the following:

- jdom.jar
- log4j-1.2.16.jar
- smartrouting.jar

Creating a server.xml file

When performing a manual installation, you will need to indicate to the application server where the JEE SmartRouting application is to be found. Using a text editor, edit the *server.xml* file present in a directory such as, for example, “TOMCAT_HOME”\conf\,

Add the following lines to the GlobalNamingResources tab:

```
        <!--SmartRouting-->
        <Resource
                name="geoconcept/smartrouting/default"
```

```
                type="com.geoconcept.smartrouting.Provider"
                scope="Shareable"
                description="Smartrouting connection factory -local dll"
                auth="Container"
                RootDirectory="``<SMARTROUTING_HOME>''\smartrouting\jee\smartrouting"
                GraphsDirectory="``<DATA_HOME>''\data\maps"
                factory="com.geoconcept.smartrouting.connect.tomcat.ConnectionFactory"
                ConnectionMode="LocalDll"
    />
```

The **SMARTROUTING_HOME** and **DATA_HOME** character strings should be replaced by suitable filepaths.

As an option, you can also add the filepath to a directory that stores the reference tables:

```
GraphsDirectory="D:\Data\graphs"
```

SmartRouting-admin application

This application allows you to test that JEE SmartRouting is operating correctly. To deploy it you will need to:

- copy the **"<GEOCONCEPT_WEB_HOME>"\tools\admin\webapps\smartrouting-admin.war** file into the **"<GEOCONCEPT_WEB_HOME>"\tomcat\webapps** folder
- copy the **"<GEOCONCEPT_WEB_HOME>"\tools\admin\config\smartrouting-admin.xml** file into the **"<GEOCONCEPT_WEB_HOME>"\tomcat\conf\Catalina\localhost** folder

Open an Internet browser and type the following address: http://name_of_server:number_of_port/smartrouting-admin

For example, in our case: http://localhost/smartrouting-admin.

The Check provider access allows you to verify that the installation is correct. The message All tests succeeded should display.

In the administration tool, click on “Datasources configuration”. The graphs defined in the default directory (or the directory defined by the GraphsDirectory tag in the *server.xml* file) then display.

By clicking on test, you can test the calculation of a route: a result should appear in the window located below the search form.

Deployment of the application

The web application deployed by the installer is geoconcept-web.

This application allows you to handle parameters for Geoconcept Web. You will beed to deploy the application in the architecture installed beforehand.

Over and above its function as black box for responding to web service queries, the web application provides an interface for defining certain parameters:

- the reference table used by the geocoding web service,

- the graph to use for calculating a route,
- management of the cache:
  - cache directory,
  - deleting or invalidating the cache,
  - pre-calculation of the cache for certain map view tabs,
- management of users, user rights, and user groups,
- management of saved images in the database.

The *.war file

The .war file is the compressed file containing the web application. It will be necessary to deploy it in the Apache Tomcat server.

You will find this war file in the “<GEOCONCEPT_WEB_HOME>”/tomcat/webapps folder, with “<GEOCONCEPT_WEB_HOME>” the Geoconcept Web installation filepath.

Stop Apache Tomcat services.

Place the geoconcept-web.war file in the “<TOMCAT_HOME>”/webapps directory.

The .xml context file

The presence of the context file, named geoconcept-web.xml, is mandatory, and it must be located in the “<TOMCAT_HOME>”\conf\Catalina\localhost directory. This file allows the user to specify various parameters, including the password and name of the database necessary to the correct functioning of the mapping application.

This file can be created from an empty text document by modifying its extension. Examples are available at “<GEOCONCEPT_WEB_HOME>”\database\conf\Catalina\localhost.

> The name of the .war file and that of the .xml file must be identical.

It will be necessary to edit the geoconcept-web.xml file as a function of which DBMS is used. Copy-Paste in this file the following parameters depending on which DBMS you are using, and modify:

- the user (web in our example),
- the password associated to the user (web in our example),
- the database schema for the application (SCHEMA_BASE in our example),
- the installation filepath for the solution (“<GEOCONCEPT_WEB_HOME>” in our example).

> Special case scenarios:
>
> - the following examples of code function in the event that the DBMS is installed on the cartographic application workstation. The `localhost` parameter is in this way assigned a value,

- in the event that the DBMS is installed on a machine OTHER than the one hosting the application, the **localhost** parameter should be replaced by the IP address or the database server name.
- For all problems (such as power failure, or sudden disconnection for other reasons) refer to the documentation concerning the JDBC connection pool tomcat 8 [https://tomcat.apache.org/tomcat-8.0-doc/jdbc-pool.html]

When using a MySQL database

```
<Context reloadable="false">

<Resource
        name="jdbc/geoweb"
        auth="Container"
        type="javax.sql.DataSource"
        username="web"
        password="web"
        driverClassName="com.mysql.jdbc.Driver"
        url="jdbc:mysql://localhost:3306/SCHEMA_BASE?useUnicode=true&amp;characterEncoding=UTF-8"
        maxActive="8"
        maxIdle="4"
        testWhileIdle="true"
    validationQuery="SELECT 1"
    testOnBorrow="true"
        timeBetweenEvictionRunsMillis="1800000"
        minEvictableIdleTimeMillis="21600000"
/>

<!-- geocoder resource definition -->
<ResourceLink
  global="geoconcept/ugc/default"
  name="geoconcept/ugc/default"
  type="com.geoconcept.ugc.service.CodingProvider"
/>

<!-- smartrouting resource definition -->
<ResourceLink
  global="geoconcept/smartrouting/default"
  name="geoconcept/smartrouting/default"
  type="com.geoconcept.smartrouting.Provider"
/>

<!-- geoconcept web map resource definition -->
<ResourceLink
  global="geoconcept/gc/default"
  name="geoconcept/gc/default"
  type="com.geoconcept.gc.provider.Provider"
/>

<Environment name="LicenseFilePath" value="C:\Program Files\GEOCONCEPT\Geoconcept Web\license"
 type="java.lang.String" override="true"/>

</Context>
```

When using PostgreSQL database

```
<Context path="geoweb" >
```

```
<Resource
        name="jdbc/geoweb"
        type="javax.sql.DataSource"
        username="web"
        password="web"
        driverClassName="org.postgresql.Driver"
        maxWait="5000"
        url="jdbc:postgresql://localhost:5432/SCHEMA_BASE?useUnicode=true&amp;characterEncoding=UTF-8"
        maxActive="8"
        maxIdle="4"
/>

<!-- geocoder resource definition -->
<ResourceLink
  global="geoconcept/ugc/default"
  name="geoconcept/ugc/default"
  type="com.geoconcept.ugc.service.CodingProvider"
/>

<!-- smartrouting resource definition -->
<ResourceLink
  global="geoconcept/smartrouting/default"
  name="geoconcept/smartrouting/default"
  type="com.geoconcept.smartrouting.Provider"
/>

<!-- geoconcept web map resource definition -->
<ResourceLink
  global="geoconcept/gc/default"
  name="geoconcept/gc/default"
  type="com.geoconcept.gc.provider.Provider"
/>

<Environment name="LicenseFilePath" value="C:\Program Files\GEOCONCEPT\Geoconcept Web\license"
 type="java.lang.String" override="true"/>

</Context>
```

When using a SQL Server database

```
<Context reloadable="false">
<Resource
        name="jdbc/geoweb"
        auth="Container"
        type="javax.sql.DataSource"
        username="web"
        password="web"
        driverClassName="com.microsoft.sqlserver.jdbc.SQLServerDriver"
        url="jdbc:sqlserver://localhost:1433;databaseName=SCHEMA_BASE;"
        maxActive="8"
        maxIdle="4"
/>

<!-- geocoder resource definition -->
<ResourceLink
  global="geoconcept/ugc/default"
  name="geoconcept/ugc/default"
  type="com.geoconcept.ugc.service.CodingProvider"
/>

<!-- smartrouting resource definition -->
<ResourceLink
  global="geoconcept/smartrouting/default"
```

```
  name="geoconcept/smartrouting/default"
  type="com.geoconcept.smartrouting.Provider"
/>

<!-- geoconcept web map resource definition -->
<ResourceLink
  global="geoconcept/gc/default"
  name="geoconcept/gc/default"
  type="com.geoconcept.gc.provider.Provider"
/>

<Environment name="LicenseFilePath" value="C:\Program Files\GEOCONCEPT\Geoconcept Web\license"
 type="java.lang.String" override="true"/>

</Context>
```

When using an Oracle database

Note that the Oracle connection or login string is not identical, depending on the method (SID or Service Name) used:

- SID : url="jdbc:oracle:thin:@localhost:1521:SCHEMA_BASE"
- Service Name : url="jdbc:oracle:thin:@//localhost:1521/SCHEMA_BASE"

```
<Context reloadable="true">

 <Resource name="jdbc/geoweb" auth="Container"
        type="javax.sql.DataSource"
        username="web"
        password="web"
        driverClassName="oracle.jdbc.OracleDriver"
        url="jdbc:oracle:thin:@localhost:1521:SCHEMA_BASE"
        maxActive="8"
        maxIdle="4"
        testWhileIdle="true"
        timeBetweenEvictionRunsMillis="1800000"
        minEvictableIdleTimeMillis="21600000"/>

<!-- geocoder resource definition -->
<ResourceLink
  global="geoconcept/ugc/default"
  name="geoconcept/ugc/default"
  type="com.geoconcept.ugc.service.CodingProvider"
/>

<!-- smartrouting resource definition -->
<ResourceLink
  global="geoconcept/smartrouting/default"
  name="geoconcept/smartrouting/default"
  type="com.geoconcept.smartrouting.Provider"
/>

<!-- geoconcept web map resource definition -->
<ResourceLink
  global="geoconcept/gc/default"
  name="geoconcept/gc/default"
  type="com.geoconcept.gc.provider.Provider"
/>
```

```
<Environment name="LicenseFilePath" value="C:\Program Files\GEOCONCEPT\Geoconcept Web\license"
 type="java.lang.String" override="true"/>

</Context>
```

When using a version of Oracle Express, the value to indicate for SCHEMA_BASE is “XE”.

When using an HSQLDB database

HSQLDB is a database written in Java. It is an embedded database: it creates files directly on the disk: no previous installation is therefore necessary.

In the context of utilisation of Geoconcept Web, parameters may be stored with the help of a database solution embedded via HSQLDB technology. To obtain the JDBC driver, go to the following site: http://www.hsqldb.org/. This driver takes the form hsqldb.jar. It should be placed in the “<TOMCAT_HOME”>\lib directory.

When using this database, it will be necessary to create the DesignerParameters.xml file in the “<TOMCAT_HOME>”\lib directory and to complete the parameters as described below, with parameters specific to the configuration of your server. In the example below, the DB files will be created directly in the C:\DB directory. This parameter can be modified via the `url` line.

```
<Context path="/geoconcept-web" reloadable="true" >
<!-- Extra info begin -->
<Parameter name="database.connection.datasource"
value="java:comp/env/jdbc/geoweb" override="true"/>

<Resource
        name="jdbc/geoweb"
        auth="Container"
        driverClassName="org.hsqldb.jdbcDriver"
        maxActive="100"
        maxIdle="30"
        maxWait="10000"
        password="web"
        username="web"
        type="javax.sql.DataSource"
        url="jdbc:hsqldb:file:[Path\To\Database]"
/>

<!-- geocoder resource definition -->
<ResourceLink
  global="geoconcept/ugc/default"
  name="geoconcept/ugc/default"
  type="com.geoconcept.ugc.service.CodingProvider"
/>

<!-- smartrouting resource definition -->
<ResourceLink
  global="geoconcept/smartrouting/default"
  name="geoconcept/smartrouting/default"
  type="com.geoconcept.smartrouting.Provider"
/>
```

```
<!-- geoconcept web map resource definition -->
<ResourceLink
  global="geoconcept/gc/default"
  name="geoconcept/gc/default"
  type="com.geoconcept.gc.provider.Provider"
/>

<!-- Extra info end

<Logger className="org.apache.catalina.logger.SystemOutLogger" verbosity="4" timestamp="true"/>

<Environment name="LicenseFilePath" value="``<GEOCONCEPT_WEB_HOME>''\license" type="java.lang.String"
 override="true"/>

</Context>
```

Summary:

- the *geoconcept-web.war* file must be deployed in “<TOMCAT_HOME>”/webapps,
- the *geoconcept-web.war* file must be deployed in “<TOMCAT_HOME>”/conf/Catalina/localhost.

Configuring the web application

Once the .war and .xml files have been stored in their respective disk locations (cf. preceding paragraphs), run the Apache Tomcat services.

It will then be necessary to specify certain parameters in order to be sure the cartographic application and associated services operate correctly.

There are two ways to apply any adjustments necessary:

- modify the database directly on condition that access is possible on the server or remotely,
- modify the parameters via the administration console. The changes will be automatically saved in the database.

We will select the second solution. The first is reserved for advanced users who know how the application operates, and how to set the various parameters required for the smooth operation of the application.

Modifying parameters via the administration console

The console is accessible via the URL: http://localhost/geoconcept-web from the server. This URL must be adapted to your own installation (localhost replaced by the name of your machine, a port number if applicable, geoconcept-web replaced by the filename of your .war file if you have modified the geoconcept-web name).

By default, the connection parameters are the following: admin / geoconcept. Connect to the application.

Example of a connection to the application

By default, the user sees the home page display.

To recap: For the correct deployment, you will need to fulfill the following 5 conditions:

- in a database, create a schema dedicated to the deployment,
- place a context (.xml) file correctly with the name of the web portal that the administrator wants to deploy,
- add the .war file (compressed file) containing the files necessary to the correct functioning of the web application,
- verify that the names of the .war and .xml files have the same name; (Example: *'geoconcept-web'*)
- the (.xml) context file should mention in one of its parameters the name of the database schema created to receive the tables needed for the application to operate correctly,

If any one of these conditions is not respected, deployment will fail.

Utilisation

Introduction

Once installed, Geoconcept Web allows you to set up a mapping web site. In just a few simple steps, you can publish a Geoconcept map via the Internet.

We would like to remind users that the presence of a database such as MySQL, PostgreSQL, Oracle, SQL Server, or an embedded database such as HSQLDB is a requirement for Geoconcept Web to operate, to enable storage of the application parameters and any relevant business data.

The end result of Geoconcept Web is a cartographic web portal suitable for publishing a Geoconcept map and/or Webmaps to the highest possible number of users, while offering a panel of functionalities enabling seamless browsing (moving or zooming on a map).

The Geoconcept map must have been configured in advance via the Geoconcept GIS single-user workstation:

- logical scales,
- stored positions,
- object display (display scales, map display and visibility tabs),
- calculation and configuration of thematic analyses,
- others ….

Login

Login identifiers

Administrators and contributors access the application's login page at the following address: http://server-name/geoconcept-web.

By default, login identifiers for the administrator are:

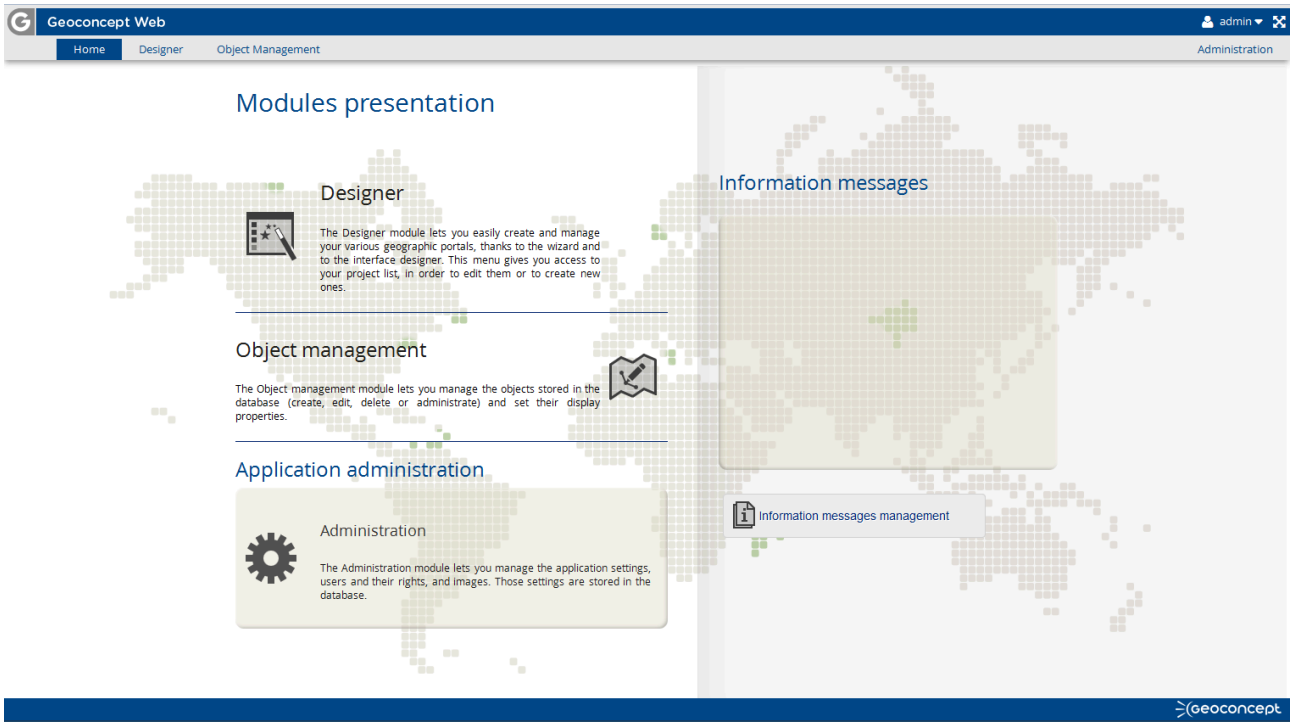
- user name: admin
- password: geoconcept

We encourage users to change this password when they first log on, using the dedicated interface in the Administration tab.

Home tab

Following login, the following home page displays.

Home tab



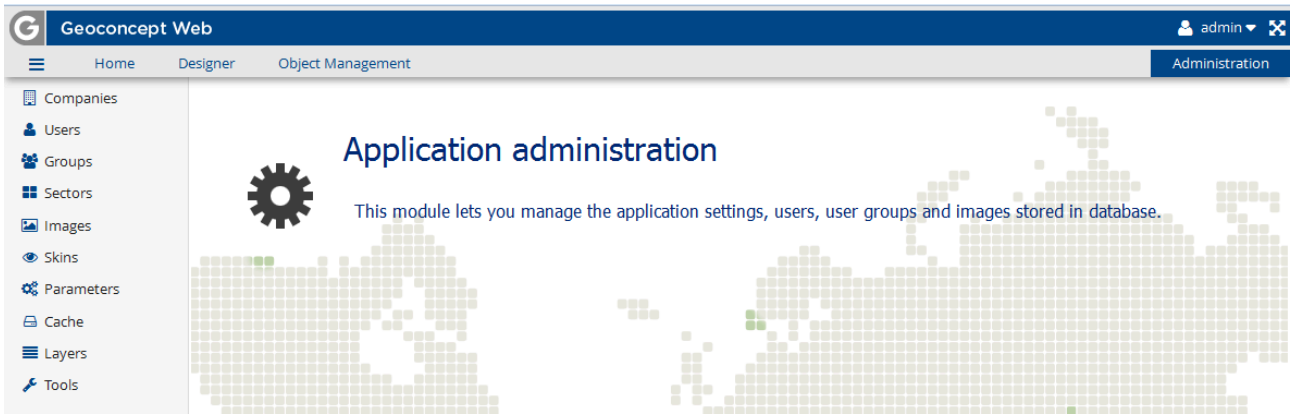
This tab is always available as a default tab for all logged in users. It provides access to Designer and Administration functionalities if the identified user has the appropriate rights, and to the My portals section, the only place where portals available for for each user are listed, depending on their rights. This page also serves to display information messages saved by the platform administrator (in the right-hand part of the screen).

Administration / Designer

Geoconcept Web is characterized by two major and distinct components:

The Administration

Administration tab



This interface serves to handle users and user groups, application parameters, defined images and style sheets, the cache and the various types of mapping layers and access to web services. The latter can be activated if you have subscribed (contact adc@geoconcept.com [mailto:adc@geoconcept.com] for more information) in the settings chapter under Cloud data.

Administration is handled via rights, that provide access. The various functionalities are also managed via a rights system, described in the documentation that follows.

Refer to the Administration section to find out more about configuring this interface.

The super administrator for the application will have access to all functionalities that will be described in the remainder of this document. For best possible performances, it is desirable that this super administrator has access directly to the server on which the solution is hosted, since it could be called upon to made modifications directly on the server.

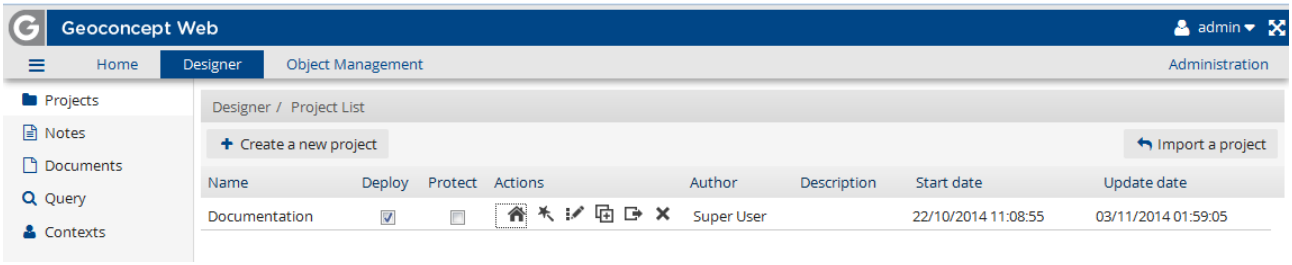
Also, it could be the special contact on Geoconcept's technical support team in the event of a problem.

The Designer

The Designer serves to publish an Internet site in a series of steps. An Interface composer then serves to enrich the functionalities of the map portal.

This tab is available for all users assigned the relevant rights. It provides access to an interface for managing all the various available websites on the platform, and the user has the option to deploy several portals simultaneously. A project is defined as a set of saved paremeters for a web site: functionalities available, placing of functionalities, displayed Geoconcept map, visibility tabs used, webmap sources, house style. Once created, the project is listed with creation and editing dates displayed.

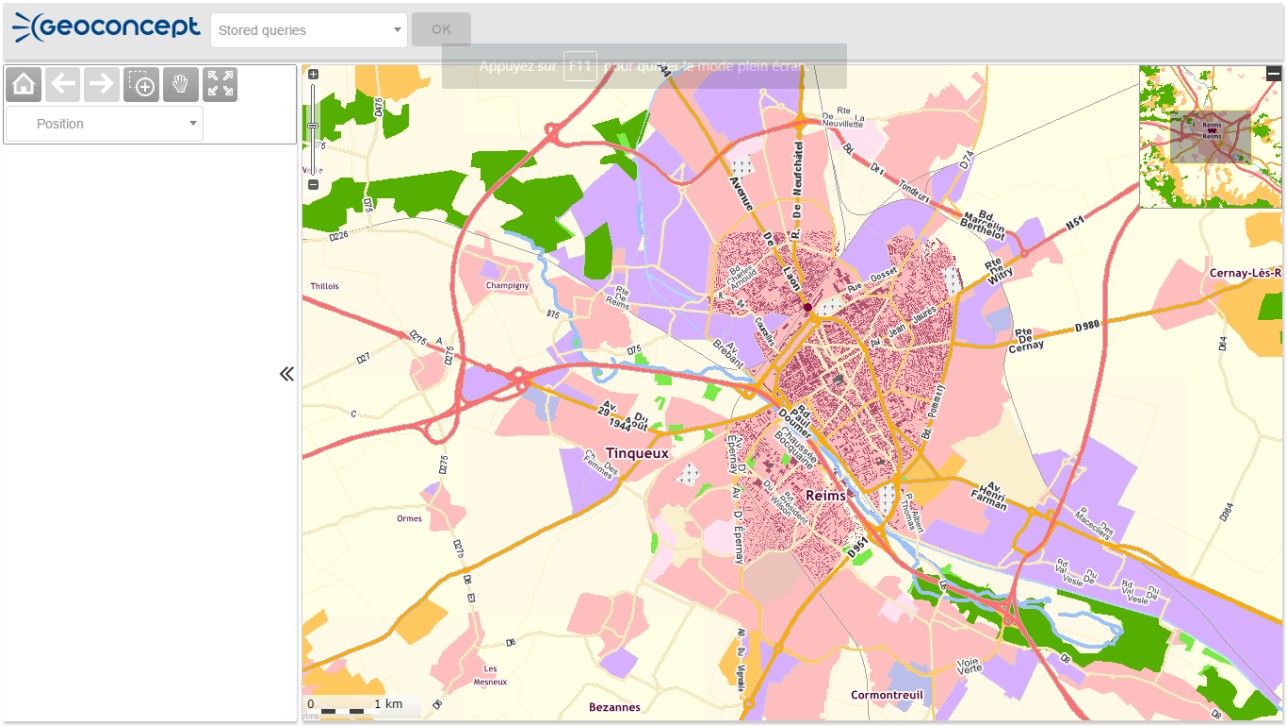
Managing projects in the Designer



If desired, the user can apply a change to a precise stage of their project creation, using icons in the Actions column:

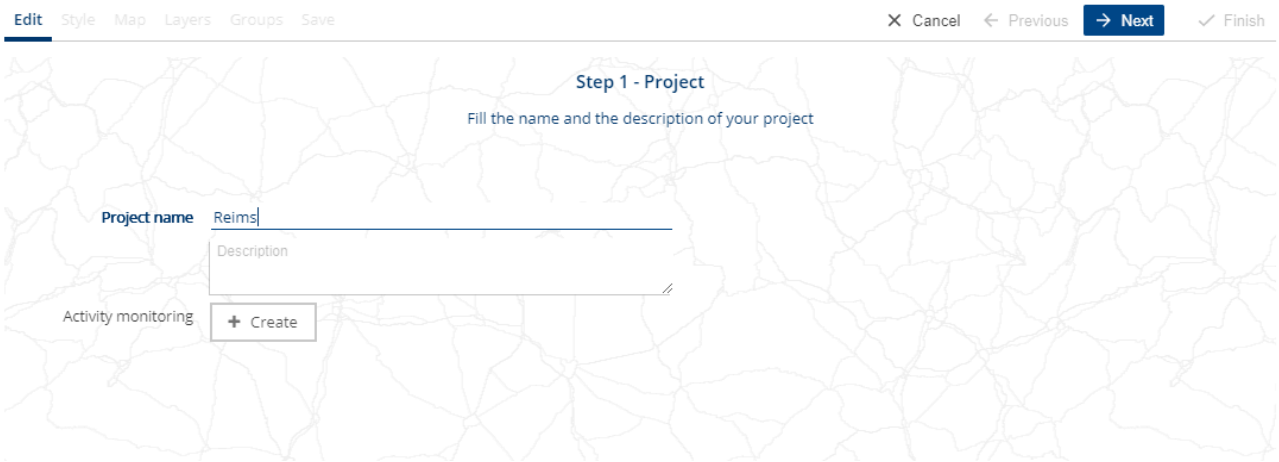
- open their portal: running the project in a new web browser tab. The mapping portal is by default open to all users, but the option to restrict access does exist, using the Administration functionalities.

Preview of a cartographic portal that has been generated



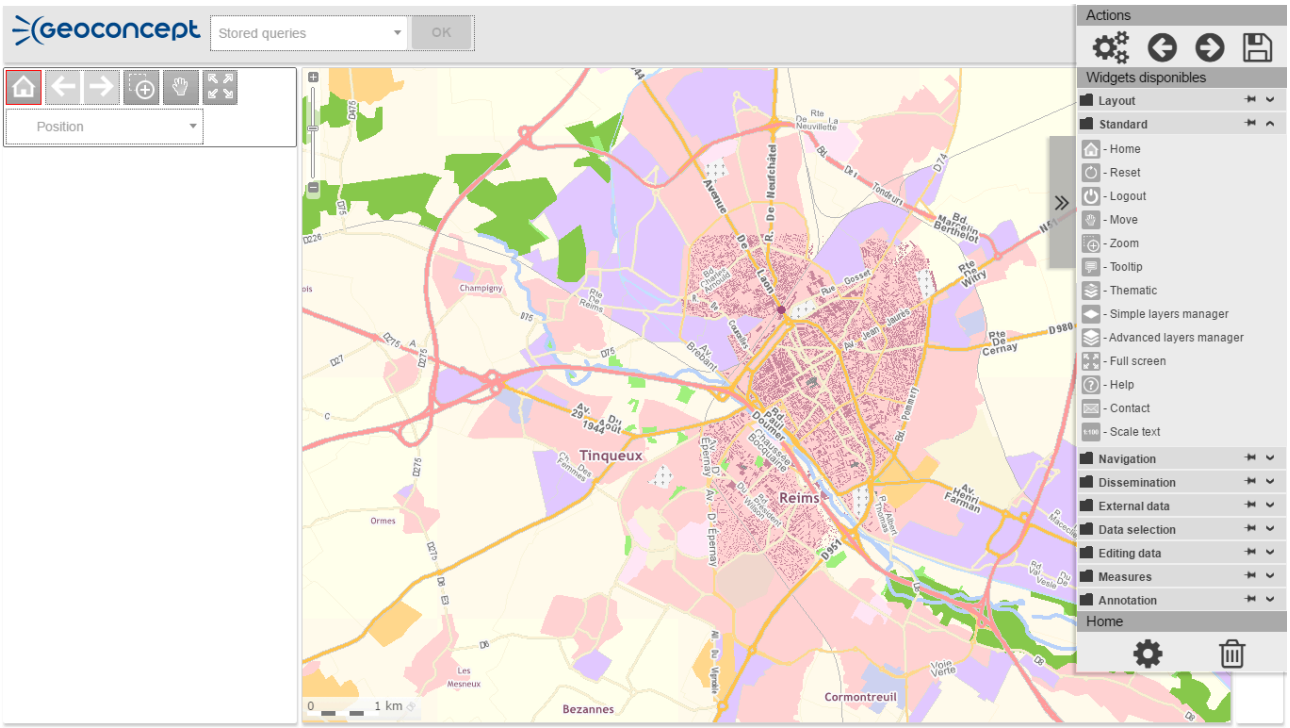
- go back into the creation Assistant or wizard: choice of layers, views, portal colours etc. This Assistant has 6 steps guiding you to define the parameters for the Internet site to be deployed.

Preview of the steps in the wizard



- Go directly into the Composer: add functionalities, move certain widgets. After using the Assistant, the Composer provides a preview of the site with a library of functionalities enabling intuitive positioning of widgets within the structure.

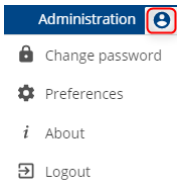
Preview of the Composer



- Duplicate the project
- Extract the project
- Delete the project

The User menu

User menu



The User button allows :

- to change the password
- to access to preferences (languages and themes)
- to go to the About section
- to log out

Change password

The interface requests the user enters the old password for the connected user and prompts them to enter a new password. This new password will need to be confirmed.

Preferences

Here you can change the language version: French, English, Japanese, Chinese, German and Spanish.

This dialogue also lets you choose a theme for the overall appearance of the site. The theme is defined in the Annotation section of the administration.

Any change in the preferences must be validated using the Save button.

About

This dialogue informs you about the version of Geoconcept Web in use, and the date the license will expire.

Logout

Click on Log out to disconnect from Geoconcept Web.

Designer tab

Before going any further, here is a list of some pointers giving advice about how to achieve optimum utilisation of the map being published:

- do not put special characters in the names of view tabs (so, no spaces, accents, or special characters).
- verify that the space delimiters correspond to the bounds used (in Geoconcept, File manu / Map Properties, and then on Space),
- configure the map background colour and the workspace background colour to white,
- configure the legends for each of the view tabs that will be displayed in the web site.

Projects

This interface handles the various projects created on the platform. In it you will find the characteristics of each of the projects recorded :

- Name,
- Deploy: if this check-box is checked, the project in question is on-line and accessible via a URL of the type http://serveur:numero-port/nom-application/easy/public/portal/nom-projet. Clicking on the Portal button opens the mapping web site in a new tab in your browser,

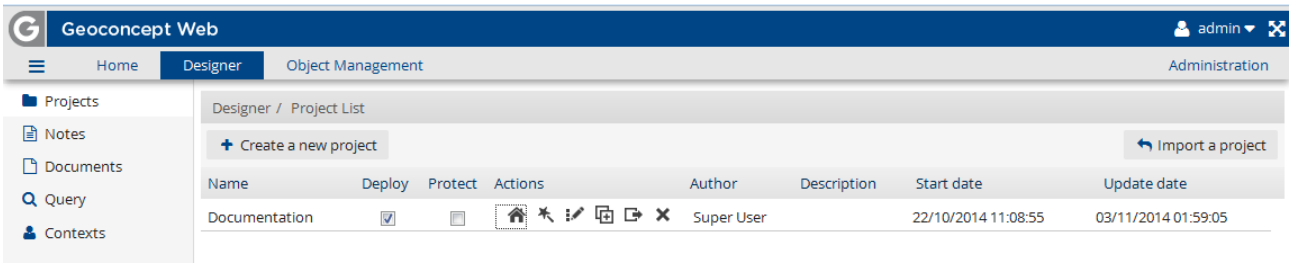
- Protect: if this check-box is checked, the cartographic portal is protected by a secured page: the user must then have been declared in the application to connect to it. The url of a private portal displays in the form: http://serveur:numero-port/nom-application/easy/private/portal/project name

If this is not the case, the user will be refused access. If the check-box is not checked, the web site will be accessible to everyone via its URL,

- Actions:
  - Portal: clicking on this button opens the cartographic web site in a new tab in the browse,
  - Assistant: a short-cut enabling you to return in the ward steps to edit a project that has already been terminated,
  - Composer: a short-cut providing a direct route to open the module and then select functionalities for the portal, or move them somewhere else, or delete them,
  - Duplicate the project: Click on the + button in the project to duplicate and it will be "cloned" once the new name has been entered.
  - Extract the project: This function allows you to generate an archive of a project built with the Designer. The archive created contains two tables in .txt format containing all the records for parameters associated to a mapping project: "designer_layers_xxx" and "designer_project_xxx" tables. This export serves to make back-ups of projects under creation, but also means you can share a portal with another administrator, who could then, in turn, use an existing project as starting point, and modify it as required.
  - Delete: click on this button to delete the project. A confirmation message then appears,
- Author,
- Description,
- Dates of the project creation and of any updates,
- Import: the administrator can integrate a back-up of a mapping project created with the Designer in the portal. Clicking on Import a project , a new window opens so you can select the archive of the project to be restored. This is present in .zip format, and contains two files: « designer_layers_xxxx.txt» and « designer_project_xxxx.txt». Once the operation has been applied, the imported project is visible in the list of portals already created.

Any saved changes to the parameters of a project are irreversible, as much in the assistant as in the designer.

Project information



(fr) Couches

(fr) Cette section permet de paramétrer les couches qui sont affichées dans Geoconcept Web soit sous forme tuilées, soit sous forme vectorielles, soit sous forme composites. C'est également ici que les styles des couches vectorielles sont paramétrés.

(fr) Couches tuilées

(fr) Cette section permet d'interroger les cartes Geoconcept ou des sources webmaps afin de les afficher sous forme de tuiles, via une interface de paramètres. Elle permet de :

- (fr) effectuer des tests sur l'accessibilité d'une carte Geoconcept,
- (fr) visualiser un onglet de visibilité d'une carte,
- (fr) visualiser une couche d'une source webmaps,
- (fr) calculer du cache pour un onglet de visibilité,
  - (fr) sur une zone à saisir dans l'interface,
  - (fr) sur tout l'espace à des échelles définies,
  - (fr) sur une périodicité régulière,
  - (fr) à des niveaux de visibilité spécifiques,
- (fr) paramétrer un onglet de visibilité d'une carte pour une diffusion via la norme WMS ou WMTS

> (fr) Une "COUCHE" est concrètement soit un onglet de visibilité d'une carte Geoconcept, soit une Webmaps. Elle est identifiée par un nom, qui doit être unique.

> (fr) Une webmaps est une couche issue de web services cartographiques disponible sur internet.

(fr) Dans la section Couches tuilées, il est possible :

- (fr) d'ajouter de nouvelles couches,
- (fr) de trier l'ordre des couches, en cliquant sur le titre de la colonne,
- (fr) de filtrer les couches sur les champs Nom, Source et Couche en saisissant les caractères recherchés sur les libellés de colonne précédé d'une loupe,
- (fr) d'éditer et de modifier les propriétés d'une couche existante,
- (fr) de tester une couche (afficher la carte),
- (fr) de réaliser un calcul de tuiles sur une couche existante pour la stocker dans un cache,
- (fr) de supprimer une couche ou plusieurs couches en cochant la case à droite des couches correspondantes, puis en cliquant sur le bouton Supprimer , un message de confirmation permet de valider, ou non, cette action.

(fr) S'il n'existe aucune couche, il n'est possible que d'ajouter une nouvelle couche. S'il existe au moins une couche, la liste des couches s'affiche et présente :

- (fr) leur **Nom** ,
- (fr) leur **Type** ("Carte" pour Carte Geoconcept ou "Globe" pour Webmaps),
- (fr) la **Source** d'origine (nom de la carte ou source Webmaps),
- (fr) la **Couche** (onglet de visibilité pour une carte Geoconcept ou le libellé de la couche pour une Webmaps),
- (fr) le **Format image** utilisé,
- (fr) la publication de la couche aux formats **WMS/WMTS** ,
- (fr) la **Version** du cache,
- (fr) un bouton Cache permet d'accéder à la fonction de précalcul de tuiles (décrite ci-après),
- (fr) enfin, un bouton Mettre à jour permet d'incrémenter la version du cache.

(fr) Ajouter une couche ou Editer une couche

(fr) Le bouton Ajouter affiche la page de définition de couche organisée en deux onglets :

(fr) Onglet Définition

- (fr) le **Nom** de la couche. Ce paramètre décrit le nom utilisé dans l'interface pour manipuler la couche. Ce nom est utilisé pour le nommage des répertoires du cache. Il sert aussi d'identifiant de couche WMS dans le cas d'une interrogation via la norme WMS ou WMTS,
- (fr) la **Description** de la couche. Ce paramètre est facultatif,
- (fr) La **Source** permet de choisir une carte ou une source webmaps dans la liste des cartes et des sources accessibles,
- (fr) L'**Onglet** de visibilité de la carte ou la **Couche** de la source sélectionnée dans le champ **Source** ,
- (fr) La case à cocher **WMS/WMTS** permet de publier la couche selon les normes WMS/WMTS. Il est nécessaire d'activer le ou les services correspondants (Cf. section Outils / Services). Cette option n'est présente que lors de la création d'une couche issue d'une carte.

(fr) Chaque couche publiée est disponible dans deux systèmes de projection :

- (fr) la projection d'origine de la carte Geoconcept
- (fr) en latitude / longitude WGS84 (epsg:4326)

(fr) Pour consulter en utilisant le protocole WMS/WMTS utiliser les urls suivantes :

- (fr) WMS GetCapabilities : http://<server>/geoconcept-web/wms?request=GetCapabilities
- (fr) WMTS GetCapabilities : http://<server>/geoconcept-web/wmts/1.0.0/WmtsCapabilities.xml

(fr) Les options ci-dessous ne sont disponibles que pour les couches basées sur une carte.

- (fr) **Résolution standard monde** , permet d'assurer une superposition avec des couches externes (Bing Maps, Géoportail, …). Pour utiliser cette fonction il est nécessaire d'utiliser une carte Geoconcept avec la projection Mercator sur sphère,

- (fr) L'incrément de la **`Version du cache`** ,
- (fr) le **`URL des métadonnées`** . Ajoute une url, accessible depuis le widget Gestionnaire de couches avancé.
- (fr) le **`URL de la légende`** . Ajoute l'url d'une image. Cette image est affichée dans le widget Gestionnaire de couches avancé.
- (fr) le **`Image de la légende`** . Ajoute une image depuis une liste déroulante. Cette image est affichée dans le widget Gestionnaire de couches avancé. Si les paramètres **`URL de la légende`** et **`Image de la légende`** sont tous les deux renseignés, c'est ce dernier qui est utilisé.
- (fr) le **`Format image`** . Une liste déroulante permet de choisir entre les formats suivants :
  - (fr) PNG 8 bits. Ce format, parfois nommé png8 appliquant une palette de 256 couleurs utilise une compression non destructive,
  - (fr) PNG 8 bits avec transparence. C'est un format PNG de 256 couleurs dont la couleur de transparence est déterminée par le champ Couleur de la transparence (cf. ci-dessous). Ce format, parfois nommé pngt utilise une compression non destructive,
  - (fr) PNG 24 bits. Ce format d'image PNG 24 bits, parfois nommé png24, (palette de millions de couleurs) utilise une compression non destructive,
  - (fr) JPEG. Ce format d'image de 24 bits par pixels (palette de millions de couleurs) utilise une compression destructive dont le taux est paramétrable suivant le paramètre Qualité JPEG,
- (fr) **`Couleur de la transparence`** . Utilisée seulement pour le format PNG 8 bits avec transparence. La valeur par défaut est le blanc pur (#FFFFFF). La transparence étant gérée directement par le moteur d'affichage depuis la version 6.0 de Geoconcept, ce paramètre n'a d'effet que lorsque la solution utilise pour l'affichage GCIS 4.
- (fr) **`Qualité JPEG`** . Ce paramètre permet de définir la qualité des images générées. Il correspond au taux de compression de l'image lorsque le Format image est le JPEG. L'édition de cette valeur doit être un entier compris entre 0 et 100. La valeur par défaut est 75. La valeur 100 correspond à aucune compression (qualité maximale) et la valeur 1 à la compression maximale (image fortement dégradée),
- (fr) **`Largeur de tuile`** . Ce paramètre définit la largeur en pixels d'une tuile générée. Par défaut, cette valeur est fixée à 256 pixels,
- (fr) **`Hauteur de tuile`** . Ce paramètre définit la hauteur en pixels d'une tuile générée. Par défaut, cette valeur est fixée à 256 pixels,
- (fr) **`Échelle mini`** . Permet de déterminer le niveau de zoom minimum d'utilisation de la couche,
- (fr) **`Échelle maxi`** . Permet de déterminer le niveau de zoom maximum d'utilisation de la couche,
- (fr) **`Nombre de tuiles pour méta-tuile`** . Ce paramètre permet d'une part, d'affiner l'affichage des symboles et des labels, et d'autre part, d'accélérer la génération du cache en réduisant les accès disque pendant le processus de création. Par exemple, avec 4 comme valeur de méta-tuile, pour des tuiles de 256 X 256 pixels est générée une image de 1024 X 1024 pixels (soit 4 X 256) qui est ensuite découpée en 16 images de 256 X 256 pixels. La valeur optimale est 4.
- (fr) **`Filtre de couleurs`** . Ce paramètre permet de modifier l'apparence d'une couche en choissant dans le liste déroulante un filtre : Noir, niveau de gris, sépia, bleu..

(fr) Onglet Information

(fr) A titre informatif, les champs de cet onglet sont récupérées automatiquement lors de la sélection de la carte puis de l'onglet de visibilité. Ces paramètres sont :

- (fr) les Limites de la carte. Il s'agit des limites de l'espace de travail définies dans la carte Geoconcept utilisée. Elles sont définies dans Geoconcept, avec la fonction (pour Geoconcept 7.X *Bouton G / Propriétés de la carte, onglet Espace*, ou pour Geoconcept 8.0 et supérieure *Fichier / Propriétés de la carte, onglet Espace*). Ces limites sont définies par 4 paramètres :
  - (fr) X Min,
  - (fr) X Max,
  - (fr) Y Min,
  - (fr) Y Max,
- (fr) Système de projection de la carte. Les valeurs sont les codes EPSG des projections, par exemple epsg:27572 pour Lambert II Etendu.
- (fr) Précision de la carte. Elle est souvent de 1 ou de 0,01. Cette valeur s'applique à l'unité de la carte. Elle est définie dans Geoconcept, dans la fonction Fichier/Propriétés de la carte, onglet Unités,
- (fr) l'Unité de la carte. C'est souvent le mètre, mais l'unité dépend de la carte utilisée. Elle est définie dans Geoconcept, dans la fonction Fichier/Propriétés de la carte, onglet Unités,
- (fr) les Ratios : il s'agit de deux paramètres essentiels au bon affichage de la carte. Ces deux paramètres associés fixent les ratios (pixel / mètre) utilisés pour la carte et pour toutes les échelles définies sur celle-ci. Ces deux paramètres sont :
  - (fr) X Ratios,
  - (fr) Y Ratios,

(fr) Le calcul des ratios est dépendant de l'unité, de la résolution (précision) et des valeurs des 12/24 échelles logiques de cette carte.

(fr) Le bouton Enregistrer enregistre la création ou l'édition de la couche. Pour annuler, il faut soit utiliser le bouton Revenir soit sélectionner la section Couches ou tout autre section du module d'administration.

(fr) Le bouton Mettre à jour est utilisé pour mettre à jour les ratios.

(fr) Tout changement des paramètres liés au calcul des ratios induit un recalcul nécessaire de ces derniers. Sans mise à jour des données cartographiques après changement notamment des limites de l'espace de travail, de la dimension des tuiles ou de la résolution du serveur, l'affichage de la carte et la génération des tuiles sont altérés. Le phénomène observé est dans ce cas un mauvais calage des tuiles à l'affichage de la carte.

(fr) Le bouton Test permet de lancer un test d'affichage de la carte sur la couche en cours d'édition.

(fr) Le bouton Supprimer permet de supprimer la couche courante.

(fr) Calculer le cache d'une couche :

(fr) Le bouton Cache permet de lancer un processus de calcul de tuiles sur la couche pour les stocker dans un cache (Cf. section Cache du module d'administration).

(fr) Il ouvre une page d'édition des paramètres du processus, des tuiles et du cache concerné. Les paramètres sont :

- (fr) Carte. Ce paramètre est pré-renseigné et non modifiable,
- (fr) Onglet de visibilité de la carte. Ce paramètre est pré-renseigné et non modifiable,
- (fr) Largeur de tuile. Ce paramètre est pré-renseigné et non modifiable,
- (fr) Hauteur de tuile. Ce paramètre est pré-renseigné et non modifiable,
- (fr) Format image. Ce paramètre est pré-renseigné et non modifiable,
- (fr) Nombre de tuiles pour méta-tuile. Ce paramètre est pré-renseigné et non modifiable,
- (fr) Version. Ce paramètre est pré-renseigné et non modifiable,
- (fr) Échelle mini et Échelle maxi. Ces paramètres sont pré-renseignés et peuvent être modifiés afin de déterminer les échelles qui seront générées,
- (fr) Des limites spécifiques peuvent éventuellement être indiquées, afin de restreindre le calcul de tuiles à une zone géographique. Les valeurs de ces limites peuvent être renseignées soit :
  - (fr) manuellement en saisissant les 4 champs,
  - (fr) automatiquement en dessinant un polygone. Le dessin se fait en cliquant, dans la carte, sur le bouton Dessiner le surfacique puis dessinant le polygone souhaité. Un double-clic ferme le polygone et renseigne les champs avec les valeurs correspondantes. L'utilisation du polygone pour déterminer l'emprise à pré-générer permet d'optimiser le temps de génération des tuiles (cf. la section Temps de génération). Modifier le surfacique permet de déplacer les noeuds du polygone par simpler glisser avec la souris.

(fr) Le dessin d'un polygone peut être sauvegardé en cliquant sur le bouton Enregistrer, renseigner ensuite son nom dans la fenêtre de dialogue. Il apparait ensuite dans le menu déroulant de la carte et pourra être réutilisé ultérieurement pout d'autres calculs de caches.

(fr) Par défaut les limites de l'espace de travail de la carte sont utilisées.

> (fr) Dans le cas d'une couche utilisant une carte en résolution 0,01 mètre, les valeurs des limites des 4 champs doivent être saisies en centimètres.

- (fr) Nombre de threads. Ce paramètre vise à déterminer le nombre de requêtes simultanées envoyées au serveur,
- (fr) Processus précédent. Il est possible de programmer plusieurs générations de cache successives (sur plusieurs couches ou sur plusieurs zones géographiques ou échelles d'une même couche…) dans ce cas, chaque processus de génération de tuile porte un identifiant. Il est alors possible de sélectionner le processus précédant celui en cours de paramétrage. Lorsqu'un processus précédent est sélectionné dans cette liste déroulante, le processus en cours de préparation sera déclenché à la fin du processus précédent. Si aucun choix n'est fait dans cette liste déroulante, le processus commencera dès le clic sur le bouton Démarrer.

- (fr) Il existe 3 options de génération du cache en fonction des critères précédents :
  - (fr) Générer : Génère uniquement les tuiles non-existantes,
  - (fr) Mettre à jour : lorsque cette case est cochée, si des tuiles ont déjà été générées dans un cache, elles sont remplacées (remplacement physique des images sauvegardées sur un disque),
  - (fr) Effacer : Supprime les tuiles déjà générées dans un cache
- (fr) La case à cocher Invalider le précédent cache supprime le cache quelles que soient les échelles,
- (fr) La case à cocher Automatique permet de programmer une génération périodique du cache en utilisant l'ensemble des critères précédents. Cette périodicité est programmable par :
  - (fr) Minute,
  - (fr) Heure,
  - (fr) Jour,
  - (fr) Semaine,
  - (fr) Mois,
  - (fr) Année.

(fr) Le bouton Démarrer lance le processus de calcul des tuiles dans le cache. Dans le cas où aucun processus précédent n'a été défini, le démarrage est immédiat. Dans le cas où un processus précédent a été défini, le démarrage se fera après la fin du processus précédent choisi.

(fr) La rubrique *Outils / Processus* permet d'effectuer un suivi en temps réel de l'ensemble des processus de calcul de cache.

(fr) Le bouton Revenir permet l'annulation des modifications de la couche et/ou le retour à la fenêtre d'édition de la couche.

(fr) Temps de génération

(fr) Le temps de génération des tuiles varie d'une part en fonction de la puissance du serveur utilisé et d'autre part en fonction de l'emprise de la zone du nombre et des échelles calculées. Il n'est pas forcément pertinent de générer tous les niveaux d'échelles, car le changement d'un seuil de 2 (par exemple du 1/10 000 au 1/5 000) multiplie par 4 le nombre de tuiles et le temps de génération.

(fr) Pour accélérer la pré-génération des tuiles, il est recommandé d'utiliser la valeur 4 pour les méta-tuiles.

(fr) L'utilisation du polygone définissant la zone à calculer permet d'optimiser le nombre de tuiles à générer. En effet pour chaque échelle l'emprise est recalculée au plus près du polygone et évite ainsi la pré-génération des tuiles inutiles car situées à l'extérieur du polygone.

(fr) Mode configuration

(fr) Geoconcept Web permet de créer de nouvelles couches au démarrage du service. Pour cela il convient de créer le fichier "htc-layers-configuration.xml" dans le classpath du serveur d'application. Dans le cas de Tomcat, il faut placer le fichier dans le répertoire lib.

(fr) Voici un exemple de configuration du fichier xml :

```
<?xml version="1.0"?>

<htcLayersConfiguration>
        <updatable>false</updatable>
        <layerDefinitions>
                <layerDefinition>
                        <name>layername</name>
                        <map>geoconceptmap</map>
                        <tabName>tabname</tabName>
                </layerDefinition>
        </layerDefinitions>
</htcLayersConfiguration>
```

(fr) Le paramètre updatable à true permet de mettre à jour la couche si celle-ci existe déjà. Dans le cas de false, la couche est créée si elle n'existe sinon elle n'est pas modifiée.

(fr) La liste des couches à créer se trouve dans le tag "layerDefinitions". Il est possible ici de créer plusieurs couches en ajoutant autant de "layerDefinition" que nécessaire. Pour une couche, 3 paramètres sont obligatoires "name", "map", "tabName". Voici la liste des paramètres disponibles sont les suivants.

(fr) Paramètres obligatoires :

- (fr) name - Nom de la couche à créer
- (fr) map - Nom du fichier gcm de la carte
- (fr) tabName - Nom de l'onglet de visibilité utilisé dans la carte

(fr) Paramètres optionnels :

- (fr) format - Format des tuiles générées (jpg | png | png24 | pngt)
- (fr) maxScale - Echelle maximale d'affichage (valeur de 1 à 24)
- (fr) minScale - Echelle minimale d'affichage (valeur de 1 à 24)
- (fr) tileWidth - Largeur de taille de tuile (valeur par défaut 256)
- (fr) tileHeight - Hauteur de taille de tuile (valeur par défaut 256)
- (fr) metadataUrl - Url pour accéder aux métadonnées de la couche
- (fr) legendUrl - Url pour accéder à la légende de la couche

(fr) Sources webmaps

(fr) Lorsque la section Sources webmaps est choisie, il est possible :

- (fr) d'ajouter de nouvelles sources de données Webmaps,
- (fr) d'éditer et modifier les propriétés d'une source de données webmaps existante,
- (fr) de supprimer une source de données.

(fr) S'il n'existe aucune source de données, il n'est possible que d'en ajouter une nouvelle. S'il en existe au moins une, la liste des sources de données s'affiche et présente :

- (fr) leur Nom,

- (fr) leur Type,
- (fr) leur URL,

(fr) Ajouter ou Editer une source de données

(fr) Est définit ici :

- (fr) Le Nom de la source de données webmaps,
- (fr) Son Type. Le type de données est l'un des genres suivants :
  - (fr) WMTS,
  - (fr) WMS,
  - (fr) Here,
  - (fr) Here (GeoApi),
  - (fr) Bing,
  - (fr) Geoconcept cloud services.
- (fr) L'utilisateur si nécessaire,
- (fr) Le mot de passe si nécessaire.

(fr) Le bouton Enregistrer enregistre la création de la source de données webmaps. Pour annuler, il faut soit utiliser le bouton Revenir soit sélectionner la section Sources webmaps ou tout autre section du module d'administration.

(fr) Le bouton Supprimer permet de supprimer la source de données courante.

(fr) Pour utiliser les sources du Géoportail de l'IGN, vous devez utiliser l'accès WMTS avec l'url suivante :

(fr) https://wxs.ign.fr/XXXXXXXXXXXXXXXX/geoportail/wmts

(fr) en remplaçant les XXXXXXXXXXXXXXXX par votre clé et en renseignant les champs *Utilisateur* et *Mot de passe* avec vos identifiants.

(fr) Pour utiliser les sources HERE et Bing, vous devez renseigner la clé d'API fournie par ces fournisseurs.

(fr) Des crédits sont inclus avec votre licence Geoconcept Web pour utiliser les sources Here (GeoApi) et Geoconcept cloud services. S'adresser à adv@geoconcept.com [mailto:adv@geoconcept.com] pour plus de précision.

(fr) Dans le cadre de l'utilisation de Geoconcept cloud services l'url à renseigner est https://api.geoconcept.com/XX/GCW/geoconcept-

web/ en remplaçant XX par l'abbréviation du continent souhaité

(fr) Couches composites

(fr) Cette section permet de créer des groupes de couches résultant d'une association de plusieurs couches vectorielles afin de réduire le nombre de couches à afficher dans le portail depuis les widgets Gestionnaire de couches simple et Gestionnaire de couches avancé.

(fr) Les paramètres sont :

- (fr) le **`Nom`** de la couche composite qui sera affichée dans les widgets de gestion des couches.
- (fr) la **`Description`** . Ce paramètre est facultatif,
- (fr) Les **`Couches`** à sélectionner dans la liste des couches vectorielles disponibles,
- (fr) le **`URL des métadonnées`** . Ajoute une url, accessible depuis le widget Gestionnaire de couches avancé,
- (fr) le **`URL de la légende`** . Ajoute l'url d'une image. Cette image est affichée dans le widget Gestionnaire de couches avancé,
- (fr) le **`Image de la légende`** . Ajoute une image depuis une liste déroulante. Cette image est affichée dans le widget Gestionnaire de couches avancé. Si les paramètres **`URL légende`** et **`Image de légende`** sont tous les deux renseignés, c'est ce dernier qui est utilisé.

(fr) Couches vectorielles

(fr) Lorsque la section Couches vectorielles est choisie, il est possible :

- d'ajouter de nouvelles couches,
- (fr) d'éditer et modifier les propriétés d'une couche existante,
- (fr) de visualiser les données,
- (fr) de supprimer une couche.

S'il n'existe aucune couche, il n'est possible que d'ajouter une nouvelle couche. S'il existe au moins une couche, la liste des couches s'affiche et présente :

- leur Nom,
- (fr) le Type d'entité, c'est à dire le nom de la couche dans la base de données,
- (fr) le nom de la Source de données utilisée.

Ajouter une couche ou Editer une couche

(fr) On définit ici :

- (fr) le **`Nom`** de la couche vectorielle,
- (fr) La **`Source de données`** , à choisir dans la liste des sources déjà configurée,
- (fr) le **`Type d'entité`** , c'est à dire l'intitulé de la couche dans la source de données,
- le **`URL des métadonnées`** . Ajoute une url, accessible depuis le widget Gestionnaire de couches avancé.
- le **`URL de la légende`** . Ajoute l'url d'une image. Cette image est affichée dans le widget Gestionnaire de couches avancé.
- le **`Image de la légende`** . Ajoute une image depuis une liste déroulante. Cette image est affichée dans le widget Gestionnaire de couches avancé. Si les paramètres **`URL de la légende`** et **`Image de la légende`** sont tous les deux renseignés, c'est ce dernier qui est utilisé.
- (fr) Le cas échéant la **`Projection`** de la couche (non éditable).
- (fr) Les **`Groupes`** pouvant modifier cette couche.

(fr) Toutes les couches sont visibles pour tous les groupes d'utilisateurs ayant le droit d'accéder au portail.

(fr) Les droits d'utilisation des widgets édition se fait dans le Composer au niveau de chaque widget (création, modification de géométrie, suppression et modification des attributs).

(fr) Les outils de sélection des objets vecteurs ou de requêtes permettent d'afficher le résultat de la recherche tableau *Résultat de recherche*. Dans celui-ci, le bouton `ouvrir la fiche` permet d'éditer directement les attributs d'un objet.

(fr) Afin de restreindre les droits d'édition dans le tableau *Résultat de recherche*, il faut définir pour chaque couche vecteur les droits d'édition, avec le paramètre **`Groupes pouvant modifier cette couche`** dans le menu `Administration ▸ Couches ▸ Couches vecteurs ▸ Détails de la couche simple`

(fr) La case à cocher **`Actualiser la couche périodiquement`** permet d'actualiser automatiquement la couche vectorielle sans qu'il soit nécessaire pour les utilisateurs de rafraîchir leur navigateur.

(fr) Actualiser la couche périodiquement

(fr) Ce mécanisme s'appuie la table *gw_vector_update*. Cette table contient, pour chaque couche concernée, l'heure de sa dernière mise à jour. Il est nécessaire d'ajouter un trigger sur les tables vectorielles qui met à jour la table *gw_vector_update*. Les implémentations peuvent varier, mais voici un exemple possible basé sur PostgreSQL/PostGIS et la table "postgis.city".

(fr) Trigger lié à la table postgis.city

```
CREATE TRIGGER log_city_changes
    AFTER INSERT OR UPDATE OR DELETE
    ON postgis.city
    FOR EACH ROW
    EXECUTE PROCEDURE public.log_city_change();
```

(fr) Fonction ajoutée aux Trigger functions

```
-- Function: public.log_city_changes()
```

```
-- DROP FUNCTION public.log_city_changes()

CREATE OR REPLACE FUNCTION public.log_city_changes()
    RETURNS trigger AS
&BODY&
BEGIN
    UPDATE public.gw_vector_update
    SET last_modified=NOW()
    WHERE TABLE_NAME=TG_RELNAME;
    RETURN NEW;
END;
&BODY&
    LANGUAGE plpgsql VOLATILE
    COST 100;
ALTER FUNCTION public.log_city_changes()
    OWNER TO postgres;
```

(fr) Dans le cas ou la base de données est hébergée sur une machine distincte de celle utilisée par Geoconcept web (JAVA), prendre garde à ce que l'heure des deux machines soient synchrones.

(fr) L'intervalle de rafraîchissement est, par défaut, de 60 secondes. Pour le changer il faut modifier le paramètre *geographics.vectorLayer.refreshInterval* (cf. section paramètres avancés).

(fr) Sont également visibles cinq onglets :

(fr) Style

(fr) Cet onglet permet de gérer l'apparence des objets de la couche. Il existe des styles par défaut définis pour les points, les lignes et les surfaces ; mais pour chaque couche, il est possible de paramétrer une apparence spécifique. Lors de la création de la couche, le style apparaissant dans la fenêtre de visualisation est le style par défaut. Le bouton Modifier permet d'accéder aux différents paramètres du style.

(fr) Les paramètres disponibles varient en fonction du type de style :

(fr) Ponctuel

- (fr) Échelle d'affichage : permet de choisir l'échelle minimale et maximale d'affichage d'un style donné ;
- (fr) Image : permet de choisir dans la liste une des images stockées depuis le menu Administration / Images ;
- (fr) Couleur : permet de choisir la couleur du symbole dans le cas où le style ne repose pas sur une image ;
- (fr) Opacité : permet de choisir l'opacité en % de la couleur du symbole dans le cas où le style ne repose pas sur une image ;
- (fr) Taille : permet de réduire ou d'augmenter la taille de l'image affichée ;
- (fr) X et Y : disponible sur certaines images, permet de décaler le centre de l'image, afin de positionner précisément les objets dans la carte. Très pratique pour des punaises, par exemple. Ce décalage

peut également être réalisé dynamiquement à l'aide de la fenêtre d'aperçu du symbole en cliquant directement sur le point voulu, une petite croix bleu le matérialise ;

- (fr) Avec ou sans label : si l'option label est activée, il convient de chosir le champ contenant le texte à afficher, la police, sa couleur et son style (gras, italique), sa taille, la couleur du halo et sa taille, le décalage du texte en X et en Y et l'alignement vertical. Pour que les champs soient listés il faut que l'option Afficher soit cochée dans l'onglet Champs de la couche vectorielle ;
- (fr) Filtre : permet d'appliquer l'apparence définie à un objet ou groupe d'objet en choisissant le champ, l'opérateur et la valeur.
- (fr) Ajout : permet de gérer plusieurs affichages variant en fonction des échelles ;
- (fr) Dupliquer : permet de copier l'ensemble des éléments composants le style précédent afin de faciliter la construction de styles distincts en fonction des échelles. Il ne reste donc plus, par exemple, qu'à modifier la taille de la représentation pour obtenir un affichage pertinent ;
- (fr) Editeur SLD : permet, pour des usages avancés, d'éditer dans un éditeur de texte, les éléments de symbologie en suivant la norme SLD.

(fr) Linéaire

- Échelle d'affichage : permet de choisir l'échelle minimale et maximale d'affichage d'un style donné ;
- (fr) Style : permet de choisir un style de représentation du linéaire parmi les suivants (Ligne, Pointillé, Tiret, Tiret-pointillé, Long tiret et Long tiret pointillé) ;
- (fr) Couleur : permet de déterminer la couleur du linéaire ;
- (fr) Opacité : permet de modifier l'opacité affectée au linéaire ;
- (fr) Epaisseur : permet de modifier l'épaisseur du linaire ;
- (fr) Avec ou sans label : si l'option label est activée, il convient de chosir le champ contenant le texte à afficher, la police, sa couleur et son style (gras, italique), sa taille, la couleur du halo et sa taille, le décalage du texte en X et en Y et l'alignement vertical. Pour que les champs soient listés il faut que l'option Afficher soit cochée dans l'onglet Champs de la couche vectorielle ;
- (fr) Filtre : permet d'appliquer l'apparence définie à un objet ou groupe d'objet en choisissant le champ, l'opérateur et la valeur. Pour que les champs soient listés il faut que l'option Afficher soit cochée dans l'onglet Champs de la couche vectorielle ;
- (fr) Ajout : permet de gérer plusieurs affichages variant en fonction des échelles ;
- Dupliquer : permet de copier l'ensemble des éléments composants le style précédent afin de faciliter la construction de styles distincts en fonction des échelles. Il ne reste donc plus, par exemple, qu'à modifier la taille de la représentation pour obtenir un affichage pertinent ;
- (fr) Editeur SLD : permet, pour des usages avancés, d'éditer dans un éditeur de texte, les éléments de symbologie en suivant la norme SLD.

(fr) Surfacique

- Échelle d'affichage : permet de choisir l'échelle minimale et maximale d'affichage d'un style donné ;
- (fr) Couleur : permet de déterminer la couleur de fond du surfacique ;
- (fr) Opacité : permet de modifier l'opacité affectée au fond du surfacique ;
- (fr) Avec ou sans bordure : si l'option bordure est activée, il convient de chosir le style de ligne, sa couleur et son opacité et enfin son épaisseur en pixels ;

- Avec ou sans label : si l'option label est activée, il convient de chosir le champ contenant le texte à afficher, la police, sa couleur et son style (gras, italique), sa taille, la couleur du halo et sa taille, le décalage du texte en X et en Y et l'alignement vertical. Pour que les champs soient listés il faut que l'option Afficher soit cochée dans l'onglet Champs de la couche vectorielle ;
- (fr) Ajout : permet de gérer plusieurs affichages variant en fonction des échelles,
- (fr) Dupliquer : permet de copier l'ensemble des éléments composants le style précédent afin de faciliter la construction de styles distincts en fonction des échelles. Il ne reste donc plus, par exemple, qu'à modifier la taille de la représentation pour obtenir un affichage pertinent,
- Editeur SLD : permet, pour des usages avancés, d'éditer dans un éditeur de texte, les éléments de symbologie en suivant la norme SLD.

(fr) Champs

(fr) Cet onglet liste les champs de la couche, et permet d'une part de choisir ceux à proposer aux utilisateurs, en cochant ou décochant la case correspondante, et d'autre part de leur spécifier un libellé différent (Alias) pour, par exemple, les simplifier. La colonne Secteur permet de décider le champ utilisé lors de la définition des secteurs (voir la section secteur. Enfin, la colonne Afficher est utilisée pour définir un style d'objet en fonction de la valeur du champ ou pour faire apparaître cette valeur dans un libellé (voir l'Annexe SLD, elle est utilisable pour tous les styles SLD, y compris celui utilisé pour afficher les résultat du Widget *Recherche à proximité*.

(fr) Fiche

(fr) Cet onglet permet de définir les champs, leur ordonnancement, leur protection ou si leur saisie est obligatoire depuis le formulaire d'édition des objets. L'administrateur peut créer une liste de valeurs, pour faciliter la saisie d'un champ et d'éviter les erreurs (fautes de frappe évitées, valeurs inconnues renseignées, etc). Dans `Administration ▸ Couches ▸ Couches vecteurs`, choisir la couche de données vectorielles puis :

- (fr) cliquer dans l'onglet `Fiche` sur la droite de l'écran,
- (fr) en fonction de la nature du champ présent dans la table attributaire interrogée, la colonne "Liste" propose une checkbox grisée ou non,
- (fr) si elle n'est pas grisée, cela signifie qu'une liste peut être rattachée au champ choisi,
- (fr) dès lors que la checkbox rattachée à un champ est cochée, le bouton `Options de la liste` apparait dans la colonne "Valeur par défaut",
- (fr) cliquer sur le bouton `Options de la liste` ouvre une nouvelle fenêtre. Celle-ci permet à l'administrateur de renseigner la liste des valeurs qu'il souhaite mettre à disposition des utilisateurs lorsque ces derniers éditeront le champ en question,
- (fr) indiquer la valeur à rentrer dans le champ défini et cliquer sur `+` pour ajouter cette dernière à la liste de proposition,
- (fr) cliquer sur `OK` lorsque la liste est terminée,

(fr) Filtre

(fr) Cet onglet permet de définir des filtres de la couche en sa basant sur le même formulaire que celui des requêtes. Cela permet ainsi de créée l'équivalent de "vue" d'une base de données et d'associer à chaque couche un style distinct en fonction du filtre.

(fr) Données

(fr) Cet onglet permet d'avoir un aperçu des données attributaires de la couche.

(fr) Le bouton OK enregistre la création ou l'édition de la couche. Pour annuler, il faut soit utiliser le bouton Revenir soit sélectionner la section Couches ou tout autre section du module d'administration.

Le bouton Supprimer permet de supprimer la couche courante.

(fr) Le bouton Dupliquer permet de dupliquer la couche courante en incluant tous les paramètres des onglets Champs, Fiche et Filtre. Ce bouton a été ajouté pour faciliter la création de couches filtrées sur une même table, l'administrateur n'a plus qu'à modifier la valeur de filtre sur les couches dupliquées.

(fr) Sources

(fr) Lorsque la section Sources est choisie, il est possible :

- (fr) d'ajouter de nouvelles sources de données,
- (fr) d'éditer et modifier les propriétés d'une source de données existante,
- de supprimer une source de données.

S'il n'existe aucune source de données, il n'est possible que d'en ajouter une nouvelle. S'il en existe au moins une, la liste des sources de données s'affiche et présente :

- leur Nom,
- (fr) leur Type de source de données (PostGIS, Carte Geoconcept, Oracle…).

Ajouter ou Editer une source de données

Est définit ici :

- (fr) Le Nom de la source de données,
- (fr) Son Type.

(fr) Dans le cadre de l'utilisation de Microsoft SQL Server, le SRID (projection) n'est pas convenablement géré, il est donc nécessaire de le passer à 0 dans la table avec la commande suivante :

```
update <table> set <colonne geom>.STSrid=0;
```

(fr) Sont également visibles deux onglets :

- (fr) Paramètres obligatoires et Paramètres avancés dans lesquels sont précisés les paramètres nécessaires pour la connexion à la source de données. Les paramètres sont fonctions de la source de données.

(fr) Par exemple pour une source de données PostGIS, les paramètres suivants doivent être renseignés :

- (fr) host (serveur où est hébergé la base PostgreSQL,
- (fr) port (en général 5432),
- (fr) user (nom d'utilisateur),
- (fr) database (nom de la base de données),
- (fr) passwd (mot de passe).

(fr) et éventuellement :

- (fr) Schema (schéma utilisé, en général public).

(fr) Le bouton OK enregistre la création ou l'édition de la source de données. Pour annuler, il faut soit utiliser le bouton Revenir soit sélectionner la section Sources ou tout autre section du module d'administration.

Le bouton Supprimer permet de supprimer la source de données courante.

(fr) Styles par default

(fr) A partir la version 2022, le comportement des styles a été modifié, pour les couches créées dans les versions antérieures, il est nécessaire de faire les opérations suivantes :

- (fr) depuis le menu @menu(Administration / Paramètres / Paramètres avancés) passer la valeur du paramètre @menu(geographics / vectorLayer / legacyStyles) à true. Si le paramètre n'existe pas l'ajouter : *geographics.vectorLayer.legacyStyles*.
- (fr) depuis le menu @menu(Couches / Couches vectorielles / Styles par défaut), ouvrir le style à associer, dans la liste déroulante Affecter un style aux couches choisir la ou les couches à modifier puis client sur le boutton @button(Affecter).

(fr) Les styles par défaut sont conservés mais désormais la définition du style se fait dans chaque couche vectorielle.

(fr) Lorsque la section Styles par défaut est choisie, il est possible :

- (fr) d'éditer et modifier les styles,
- (fr) de supprimer les styles.

(fr) La liste des styles s'affiche et présente :

- leur Nom,
- (fr) leur Type (Ponctuel, Linéaire, Surfacique),
- (fr) éventuellement une description.

(fr) Par défault 8 modèles de style sont proposés :

- (fr) Ponctuels
  - (fr) Style par défaut des points
  - (fr) Style par défaut des points sélectionnés
  - (fr) Style par défaut des points géocodés
  - (fr) Style par défaut pour la recherche de proximité

- (fr) Linéaire
  - (fr) Style par défaut des lignes
  - (fr) Style par défaut des lignes sélectionnées
- (fr) Surfacique
  - (fr) Style par défaut des polygones
  - (fr) Style par défaut des polygones sélectionnés

(fr) Ces 8 styles sont modifiables mais ne peuvent pas être supprimés.

(fr) Editer un modèle de style :

(fr) Seuls les aspects graphiques des modèles de styles peuvent être modifiés

Les paramètres disponibles varient en fonction du type de style :

Ponctuel

- (fr) Image. Permet de choisir dans la liste une des images stockées depuis le menu Administration / Images. Par déafut, si aucune image n'est choisie (--), le symbole affiché sera un rond.
- (fr) Taille. Permet de réduire ou d'augmenter la taille de l'image affichée,
- (fr) X et Y. Permet de décaler le centre de l'image, afin de positionner précisément les objets dans la carte. Très pratique pour des punaises, par exemple. Ce décalage peut également être réalisé dynamiquement à l'aide de la fenêtre d'aperçu du symbole en cliquant directement sur le point voulu, une petite croix bleu le matérialise,
- (fr) Échelle d'affichage. Permet de choisir l'échelle minimale et maximale d'affichage d'un style donné,
- (fr) Couleur. Permet de choisir la couleur du symbole dans le cas où le style ne repose pas sur une image,
- (fr) Opacité. Permet de choisir l'opacité en % de la couleur du symbole dans le cas où le style ne repose pas sur une image,
- (fr) Ajout. Permet de gérer plusieurs affichages variant en fonction des échelles,
- (fr) Dupliquer. Permet de copier l'ensemble des éléments composants le style précédent afin de faciliter la construction de styles distincts en fonction des échelles. Il ne reste donc plus, par exemple, qu'à modifier la taille de la représentation pour obtenir un affichage pertinent,
- (fr) Editeur SLD. Permet, pour des usages avancés, d'éditer dans un éditeur de texte, les éléments de symbologie en suivant la norme SLD.

Linéaire

- (fr) Couleur. Permet de déterminer la couleur du linéaire,
- (fr) Opacité. Permet de modifier l'opacité affectée au linéaire,
- (fr) Style. Permet de choisir un style de représentation du linéaire parmi les suivants (Ligne, Pointillé, Tiret, Tiret-pointillé, Long tiret et Long tiret pointillé),
- (fr) Epaisseur. Permet de modifier l'épaisseur du linaire,
- (fr) Aperçu. Dans cette fenêtre s'affiche un aperçu du style courant,
- Échelle d'affichage. Permet de choisir l'échelle minimale et maximale d'affichage d'un style donné,

- Ajout. Permet de gérer plusieurs affichages variant en fonction des échelles,
- Dupliquer. Permet de copier l'ensemble des éléments composants le style précédent afin de faciliter la construction de styles distincts en fonction des échelles. Il ne reste donc plus, par exemple, qu'à modifier la taille de la représentation pour obtenir un affichage pertinent,
- (fr) Editeur SLD. Permet, pour des usages avancés, d'éditer dans un éditeur de texte, les éléments de symbologie en suivant la norme SLD.

Surfacique

- (fr) Couleur. Permet de déterminer la couleur de fond du surfacique,
- (fr) Opacité. Permet de modifier l'opacité affectée au fond du surfacique,
- (fr) Bordure. Permet d'afficher le contour du surfacique en modifiant couleur, opacité, style (Ligne, Pointillé, Tiret, Tiret-pointillé, Long tiret et Long tiret pointillé), et épaisseur,
- Aperçu. Dans cette fenêtre s'affiche un aperçu du style courant,
- Échelle d'affichage. Permet de choisir l'échelle minimale et maximale d'affichage d'un style donné,
- Ajout. Permet de gérer plusieurs affichages variant en fonction des échelles,
- Dupliquer. Permet de copier l'ensemble des éléments composants le style précédent afin de faciliter la construction de styles distincts en fonction des échelles. Il ne reste donc plus, par exemple, qu'à modifier la taille de la représentation pour obtenir un affichage pertinent,
- Editeur SLD. Permet, pour des usages avancés, d'éditer dans un éditeur de texte, les éléments de symbologie en suivant la norme SLD.

(fr) Le bouton `OK` enregistre la création ou l'édition d'un style. Pour annuler, il faut soit utiliser `Revenir` soit sélectionner la section Styles ou tout autre section du module d'administration.

(fr) Le bouton `Supprimer` permet de supprimer le style courant.

(fr) Des exemples de SLD sont illustrés dans l'annexe SLD.

Notes

Notes make it easy to upload information sourced by users in the field, so information items can be listed and handled via an intuitive back-office. A description of how to use Notes is given under the "Note" widget.

Before being able to exploit this functionality, it needs preparing in three stages as follows:

- definition of ***'styles'***,
- definition of ***'statuses'***,
- the creation of different ***'actions'*** that will be proposed to users, when they want to create a note.

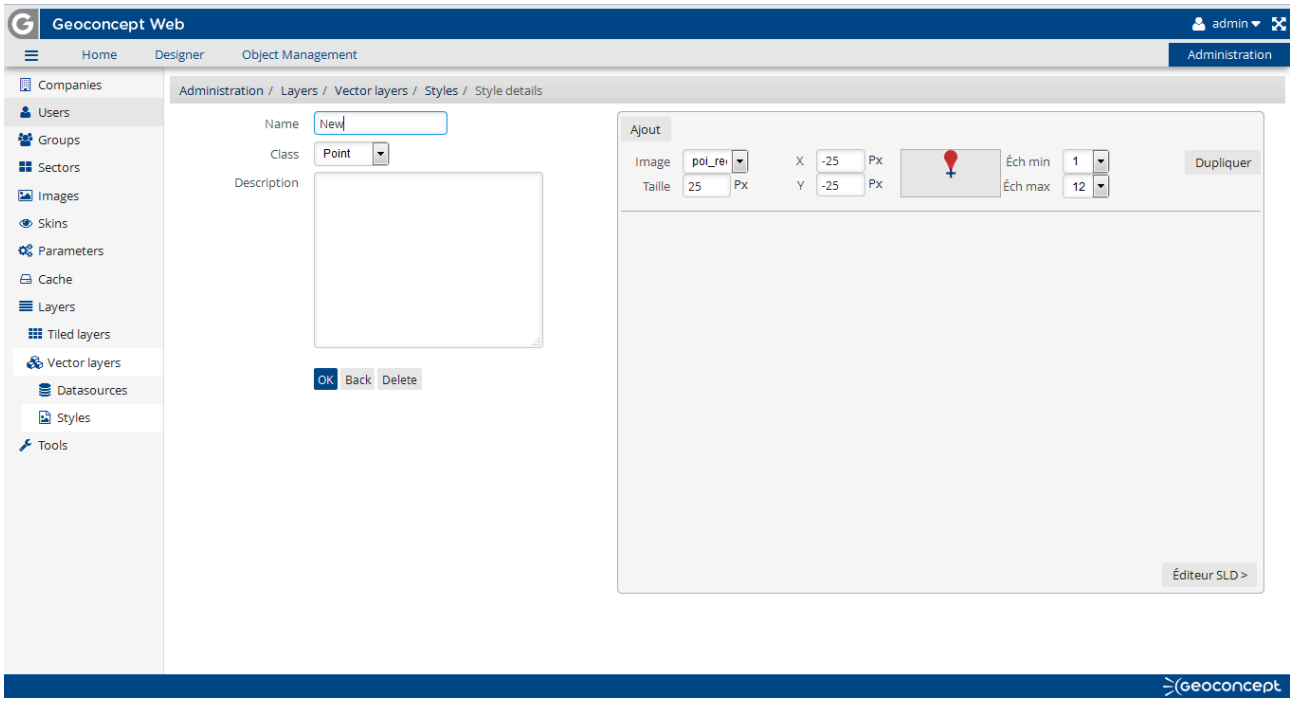
Defining styles

The administrator must perform this step with an idea in mind of the number of "states" / or "statuses", they want to create. To create their own styles, the user should go into the `Administration` tab, and

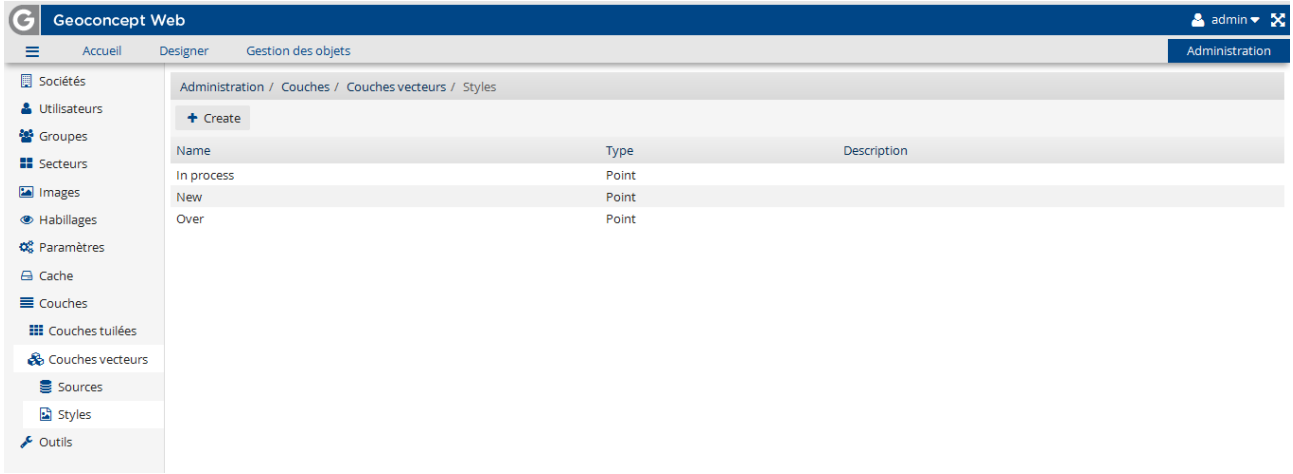
then into the Layers ▸ Vector layers ▸ styles menus, and finally click on Add. A new interface then displays allowing you to:

- give a name to the style created,
- to indicate the type of graphic representation: point / line / polygon; here, only point type styles are useful,
- add a description,
- and above all, define the visual aspect of the object, its size, colour, appearance and visibility as a function of the level of zoom,

Example of creating a style that will be associated to a note with a status of ***'New'***.



List of styles that will be associated to the statuses that a note may have.



Defining statuses

For the administrator, this means creating different treatment status categories that the Note might have. For example, an administrator might create 3 status categories that are:

- *'New*',
- *'In the process of being analysed*',
- *'Processed*',

This means that when a user of the mapping portal creates a note, they will indicate that its status is *'New*', because this information upload has just appeared. If the administrator processes this Note, they could update their status from *'New*' to *'Analysis in progress*' or directly to *'Processed*'.

In order to create the different statuses of future notes, click on the Designer tab, and then in the Notes ‣ Statuses menus, and finally click on Add.

The administrator can then define:

- The name the note status will have,
- Decide to display (or not) the point feature showing the geographic coordinates of the note,
- Indicate the style that will be associated to the note's status,
- Enter in more detail the description of the defined status,
- Predefine a subject that will be automatically indicated when changing from the note to a specific status,
- Also predefine a text item that will be indicated automatically when changing from the note to a specific status.

The values of the subject and text fields are used for sending emails (cf. the section that follows).

Defining actions

Once the style and the statuses have been created, the administrator can put in place a series of actions that the user can choose when creating a note. There is no limit to how many actions they can create, and it is possible to put the display of the latter in a hierarchy.

To create the different actions that will be proposed on creation of a new note, click on the Designer, then in the Notes ‣ Actions menus, and finally click on Add.

The administrator can then define:

- The name of the action, for example: creation of a new road segment, modification of traffic direction, location of damage or defacement of street furniture, etc.
- Give a description to the action.

Once this preparation stage has been accomplished, the administrator can preset and refine the settings for this widget by going to see the properties of this in the Composer.

Sending emails:

Sending an email, to users or administrators, when creating or editing a note, is configured in two different places:

Content

It is the values of fields that are used, these being filled during the definition of statuses:

- subject allows you to define the email subject.
- text defines the body of the email. The body may have HTML tags and also keys, described below, that allow systematic text editing:
  - {state} - Name of the note status
  - {date} - Date of the update
  - {user} - Name of the note creator
  - {processed} - Name of the person modifying the note
  - {id} - Identifier for the note
  - {author} - Name of the author of the note
  - {comment} - Comments on the note

Configuration

In the Administration ‣ Parameters section, enter the parameters of the “mail” folder:

- `host` : indicate the smtp server name for the messaging system used,
- `password` : indicate the password for the user’s messaging system,
- `port` : indicate the messaging system server port
- `starttls` : (true or false) depending on the security protocol for securing exchanges with the messaging server used,
- `username` : indicate the email address of the user’s messaging system

The `easy.widgets.note.mail` parameter defines the address of the administrator for the purpose of adding this to the recipients (with those of the user). It is possible to add several email addresses with ; as separator.

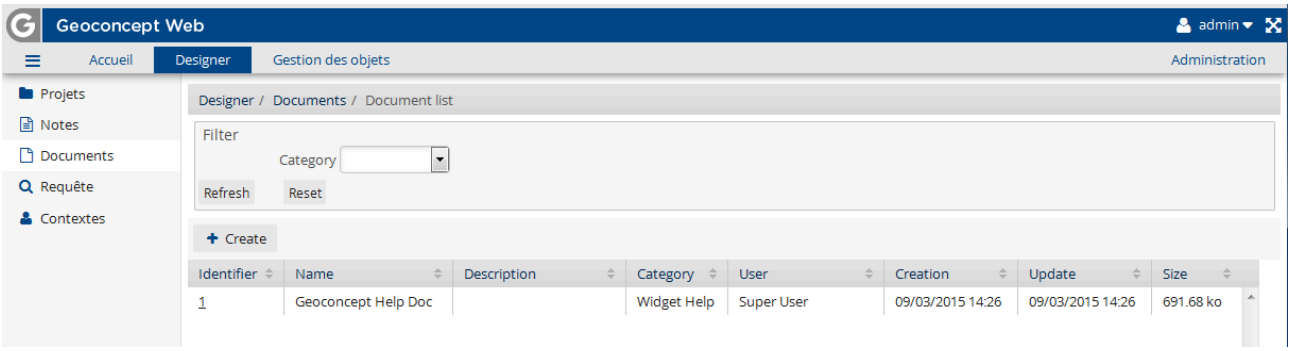
It may be necessary to authorise your email application to use the function for sending email from an application (example for Gmail [https://support.google.com/a/answer/176600?hl=en]).

Documents

Used by Help widgets but also by the Note widget to handle documents posted by users when entering the notes.

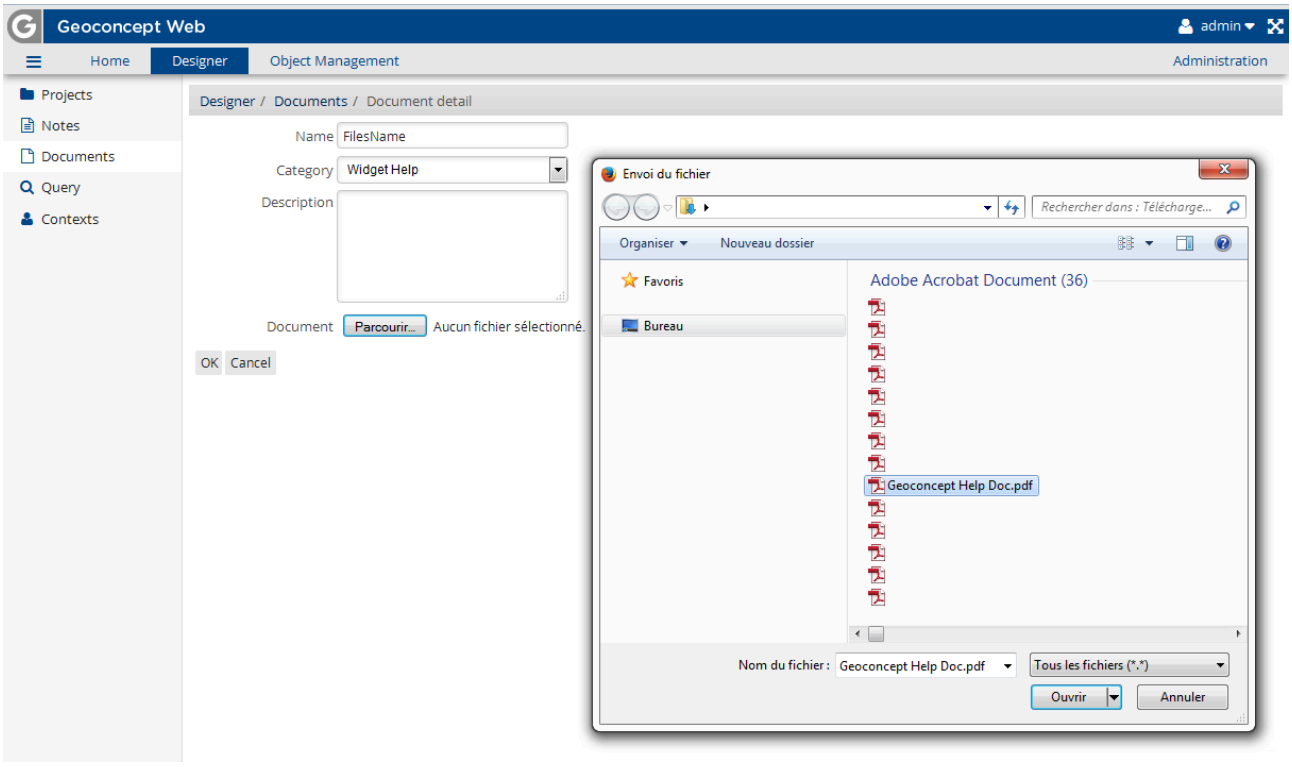
To make a document available via the Help widget, the administrator must load the file to be associate into this interface.

Integration of a help document



Click on Add and then enter the title of the future loaded document, give a description if necessary, and finally select the relevant document.

Windows of information and selection of the help document



Once the document has downloaded, the administrator must associate it to the desired mapping portal project, from the composer.

Queries

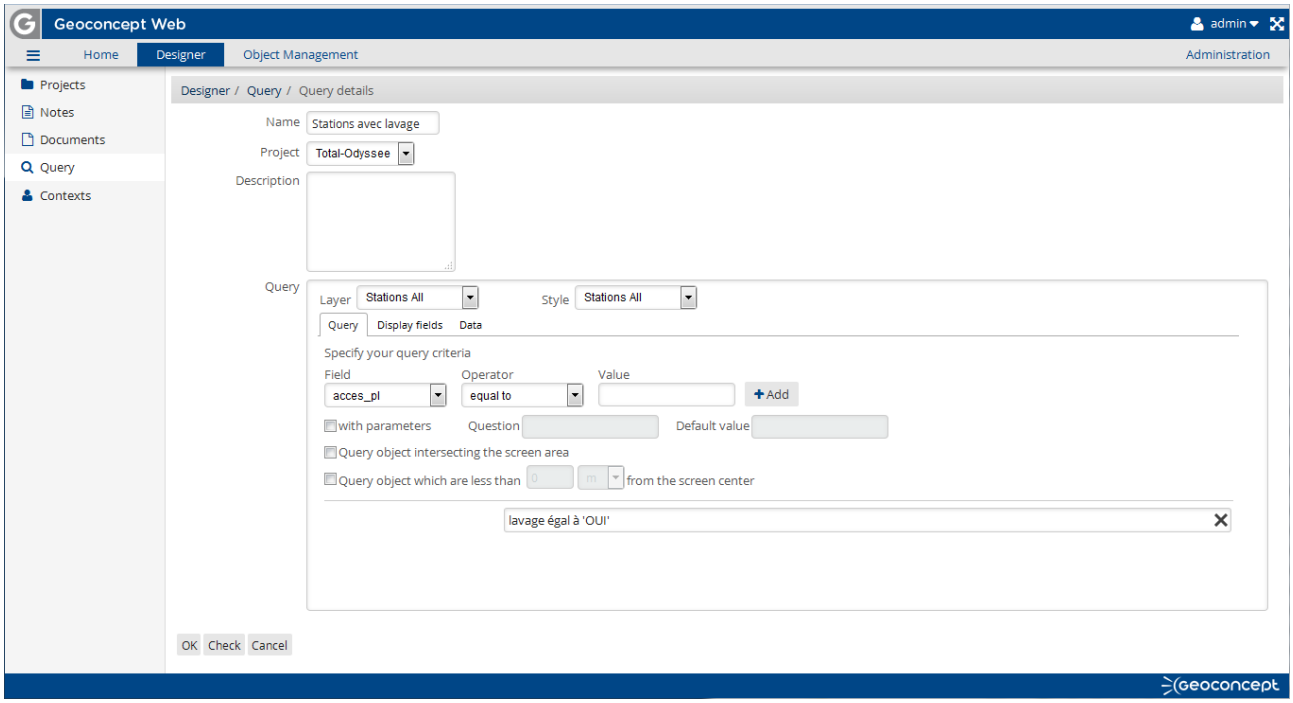
It is from this interface that the administrator creates Configured queries by clicking on Add. Here, the administrator can:

- give a name to the query,
- associate the query being created to a specific project, or group of projects,
- describe the role of the query,

- create the query itself: choose which fields to consult, which operator, definition of the data layer concerned, the style that will be associated to the result given in the query, etc.

Any presaved query can be used if the administrator has put the widget en question at the disposal of users. The latter is defined in a drop-down list containing the different queries already created in the backoffice in order to facilitate searches on users.

Configuration of a presaved query



Contexts

The different contexts created by users with the Positions, Advanced layers manager, Annotations or Isochrons widgets are stored here. The administrator can - from this interface - handle the different contexts by user, by project, and by widget type.

Predefined texts

This interface enables definition of values that are displayed by the Text widget.

- add a new preset text item by clicking on the Add button.
- indicate the title for this text item in the “Name” field, and then fill the “Value” field with the text item required that will then be displayed in the portal. To validate the content, click on OK ,

The name and the value are stored in the “gw_ogw_textdict” table. The value may be updated from an external application and is displayed in real time on the portal.

Imports of reports

This interface allows you to import files into the portal (in pdf format) and to associate them to a project, so they can be displayed by the Report widget.

(fr) Les fichiers importés sont également listés dans cette page.

To increase download size, proceed as follows:

1 - Stop Tomcat, and then edit the *server.xml* file (in the \tomcat\conf\ folder) adding the *maxSwallowSize* attribute

```
<Connector maxSwallowSize="100000000" URIEncoding="UTF-8" connectionTimeout="20000" port="8080"
      protocol="HTTP/1.1" redirectPort="8443"/>
```

Here, 100 million bytes is the upper limit permitted by Tomcat for files sent by users

2 - Start Tomcat and add the *easy.documents.maxUploadSize* parameter. Take care that the value of this parameter is smaller or equal to the _maxSwallowSize _ value defined above.

3 - Tomcat should be re-started for the modifications to take effect

Tools

Cartography

Cache update

This function allows you to update the cache with metadata for a map. It is recommended to use this in the event of a modification made to the map structure (addition of a Class or Subclass, tabs, map footprint…).

Handling security

Managing an application key

This allows association of key for the application to a project for the purpose of protecting it. The application key must be created beforehand via Administration ‣ Tools ‣ Services .

Editing widgets

Geoconcept Web supplies an editor that allows widget creation.

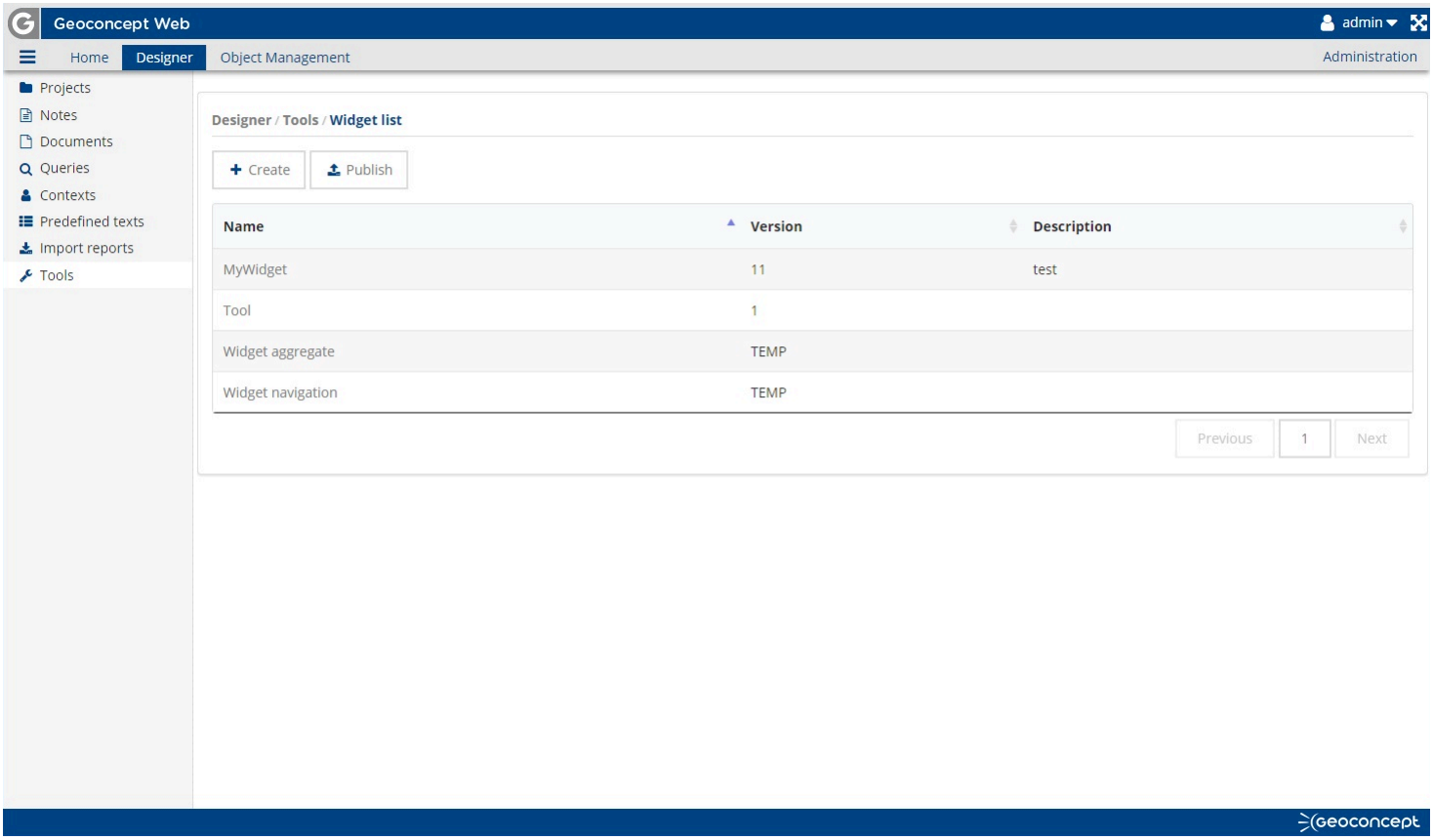
The Widgets list button provides access to the table listing widgets created and stored in the database.

Composing the widgets requires some programming knowledge (JavaScript and CSS). A widget is based on YUI and /or JQuery technologies. Dependencies can be loaded via the require.js module. Geoconcept Web widgets are based on the main module WidgetBase. They inherit all the methods enabling manipulation of the map or of the object. An API as well as a tutorial is available here [https://mygeoconcept.com/doc/gcweb/docs/en/gcweb-ws-book/kit-developpement.html] and they supply the list of all methods suggested by default.

The widgets handle the map, for which the api is available here [https://mygeoconcept.com/doc/geoapi/docs/en/geoptimization-api-book/geoptimization-js-intro.html].

List of widgets

List of widgets



Each widget created is listed in the table. We can distinguish between the following information items:

- `Name` : the name given to the widget
- `Version` : the current version of the widget
- `Description` : additional information linked to the utilisation of the widget

There are two version statuses that relate to a widget. The TEMP version concerns the status in the course of modification of a widget. The version represented by a numeric value corresponds to the widget's saved value.

Versioning of widgets is applied automatically at the time of each save operation.

To create a new widget, click on «Add».

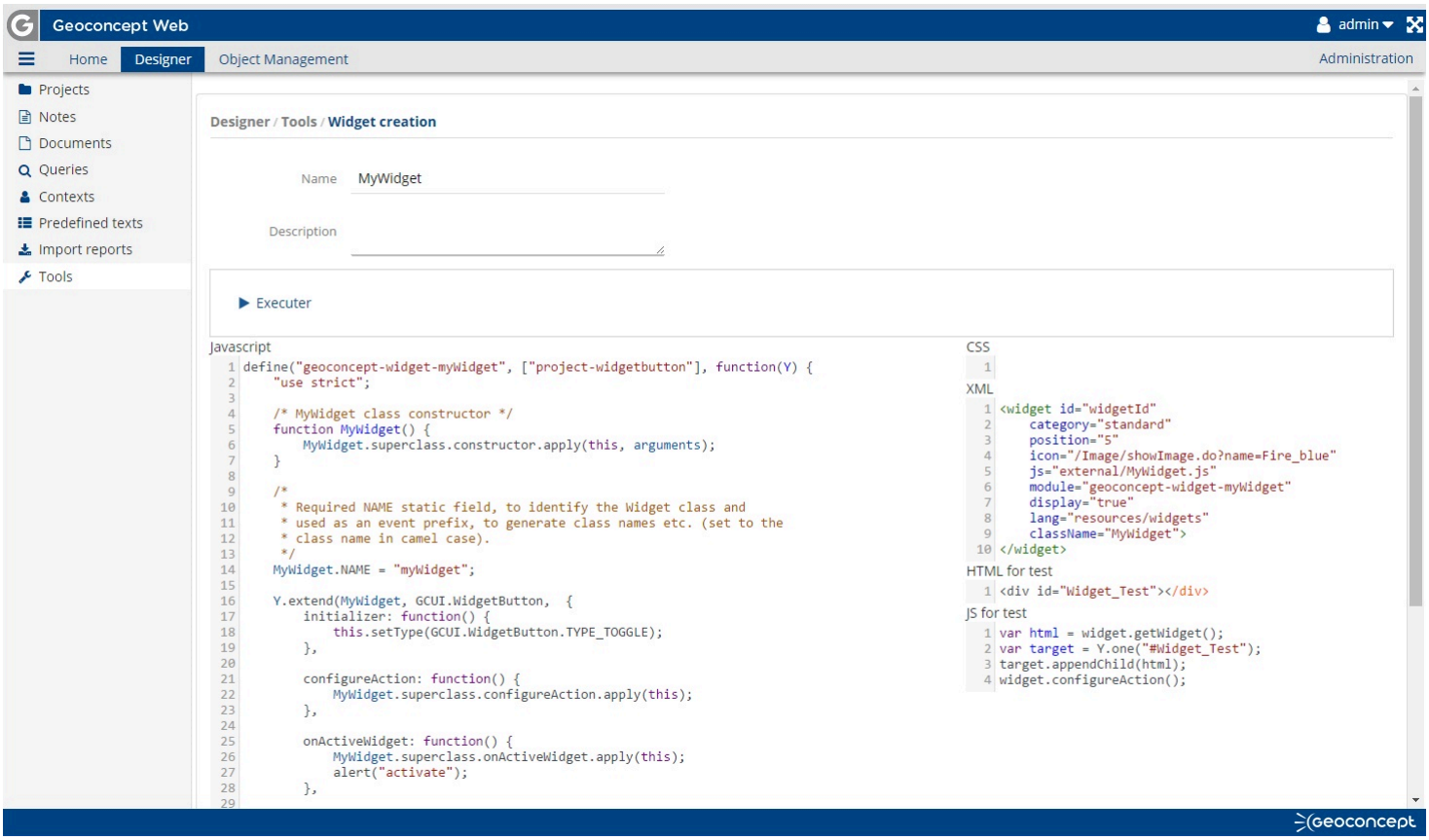
To update an existing widget, click on the name associated to the widget in question.

To deploy widgets on the server and use them in portals, you will need to click on the Publish button. This operation generates a `externalWidgets.jar` file that is placed in the directory used for external widgets. The directory filepath is defined in the Geoconcept Web administration parameters by the easy.widgets.path key.

The Publish button summarises all the widgets listed in the table. This functionality is based on the latest definitive version saved so they can be placed in the .jar file.

Creation screen

Creation screen



By default, Geoconcept Web suggest a template to use when creating a widget. This is called MyWidget. This is a single button that can be enriched as required.

The editing screen is defined in the following way:

- The name field serves to supply the name to save in the database
- The description field allows you to define the additional information concerning the widget.

The Execute button serves to test the widget within an interface. After clicking on this button, a save operation is performed in the database and the version used will then be TEMP. The TEMP version is necessarily the latest version of the widget.

Details of the «JavaScript», the «CSS», and the «XML» should be entered in the editing interface. These three items define the behaviour of the widget in a portal.

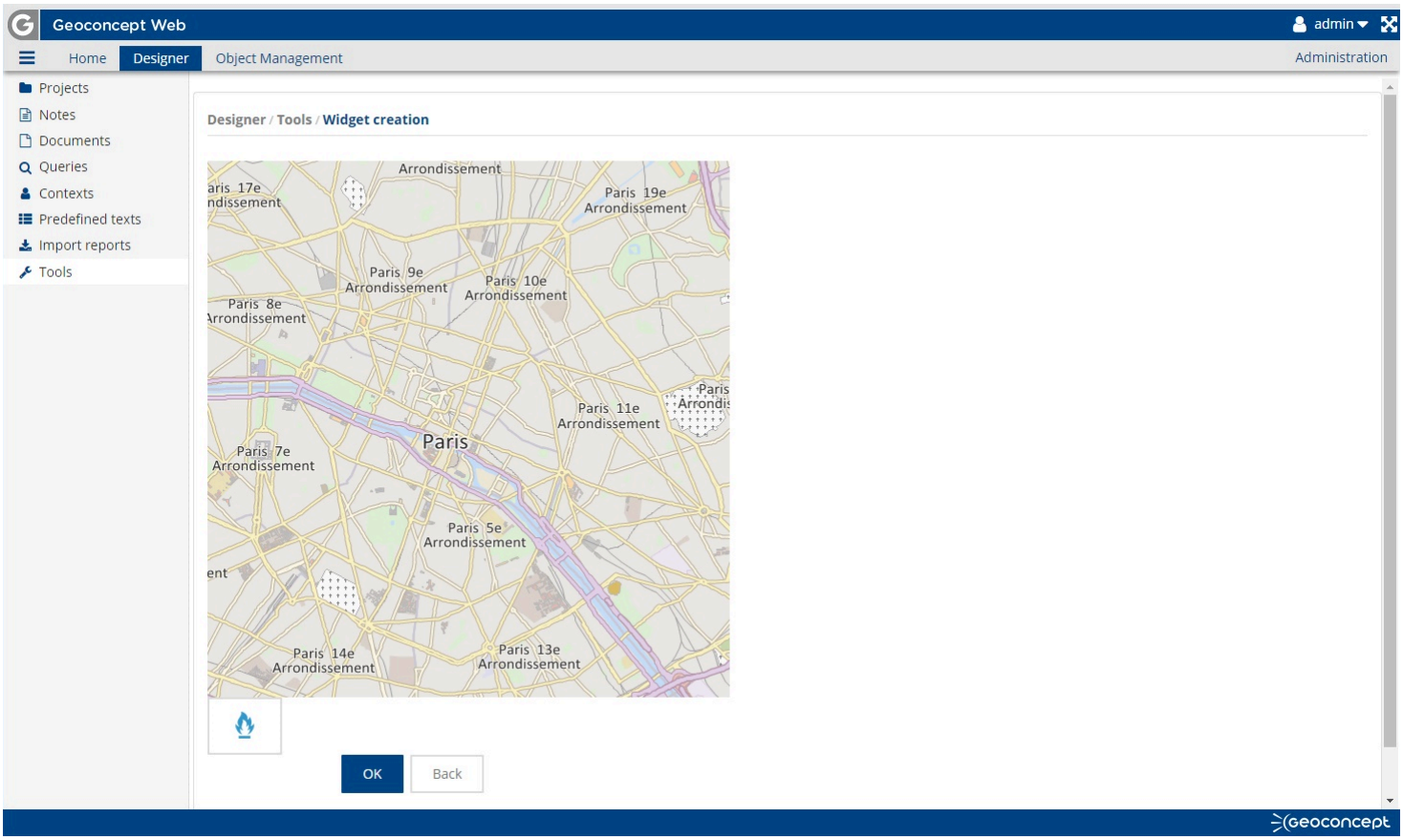
The «HTML for test» and «JS for test» items serve to define or call the methods to execute in the test page.

For example, in Geoconcept Web, a button is defined in a DIV. This DIV should therefore be created in the «HTML for test» section, and then used in the «JS for test». The default creation template will supply these 2 elements.

To finalise the creation of the widget, you need to click on the OK button. The save action increments the versioning of the widget in the process of creation and will then display this number in the list of widgets. The Back button takes you back to the previous screen.

Screen test

Test screen



The test screen provides a map that can be manipulated. In our example, the button is added subsequently since a DIV has been defined when the widget was created.

A series of tests can also be added in the editing section, in the «JS for test» space.

If the behaviour that results matches expectations, the widget can be saved via the OK button. Otherwise, the Back button allows you to switch back to the editing screen.

Wizard

The Wizard must be used to create any mapping web project, whether destined for use on a computer (classical web portal) or on a mobile terminal (portal for smartphones). The wizard consists of 6 steps enabling administrators and users with little experience of web development tools to be guided when constructing a mapping project. The steps are as follows:

- give the project a name,

- choose the general style of the portal (graphic style),
- import the data making up the portal,
- define the ordering of the layers of the future portal,
- choose user groups that will have access to the portal,
- fine tune and edit the functional side of the portal via the Composer,

For more details on mobile functionalities cf. Consult a mapping project from a mobile

Step 1: Project

The Create a new project button serves to create a new project and opens the wizard.

This first step defines a name for the project. It will also be possible to add a description of the project. This description will appear in the interface for handling projects.

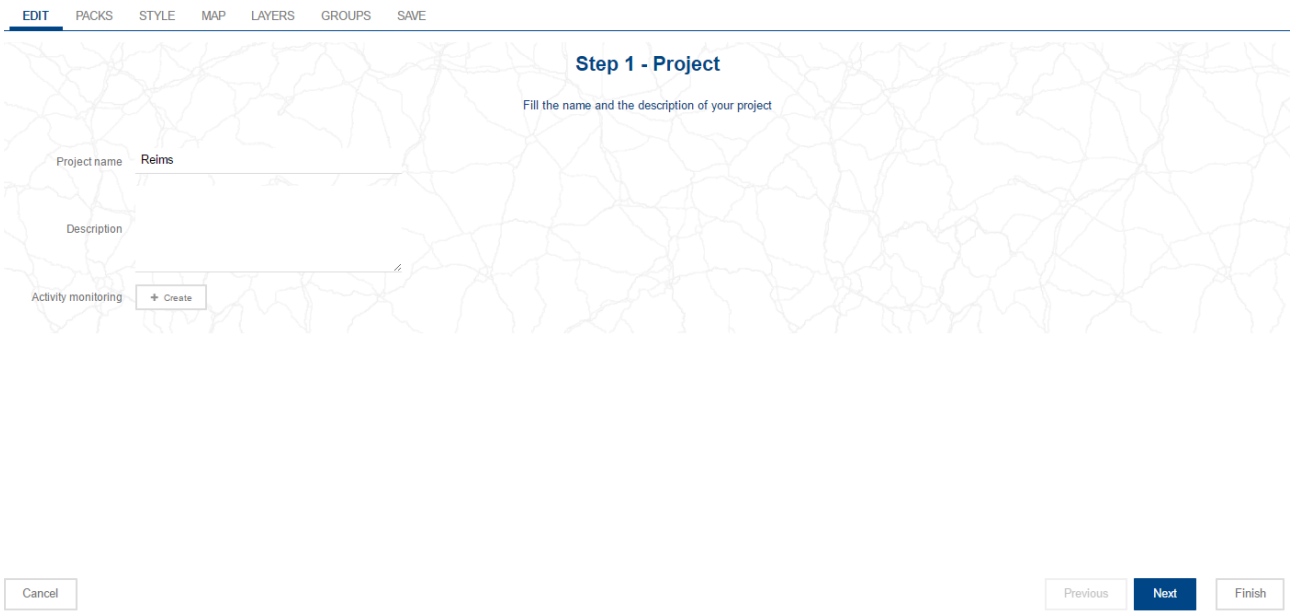
The name of the project serves to constitute the final URL for the web site. This is why it has to be unique, and must not contain any special characters.

> The name of the project must be unique and must preferably not contain special characters (spaces, accents, or special characters) to prevent any possible interference with the correct operation of the application.

Activity monitoring

Serves to measure each portal's visitor profile (number of pages seen, where visitors come from, …). The add button opens a window in which you can copy the javascript code supplied by a third party provider (Google Analytics, Xiti, …).

Step 1: Project



In every step in the assistant, there are buttons located beneath the step so you can browse backwards and forwards through the various steps:

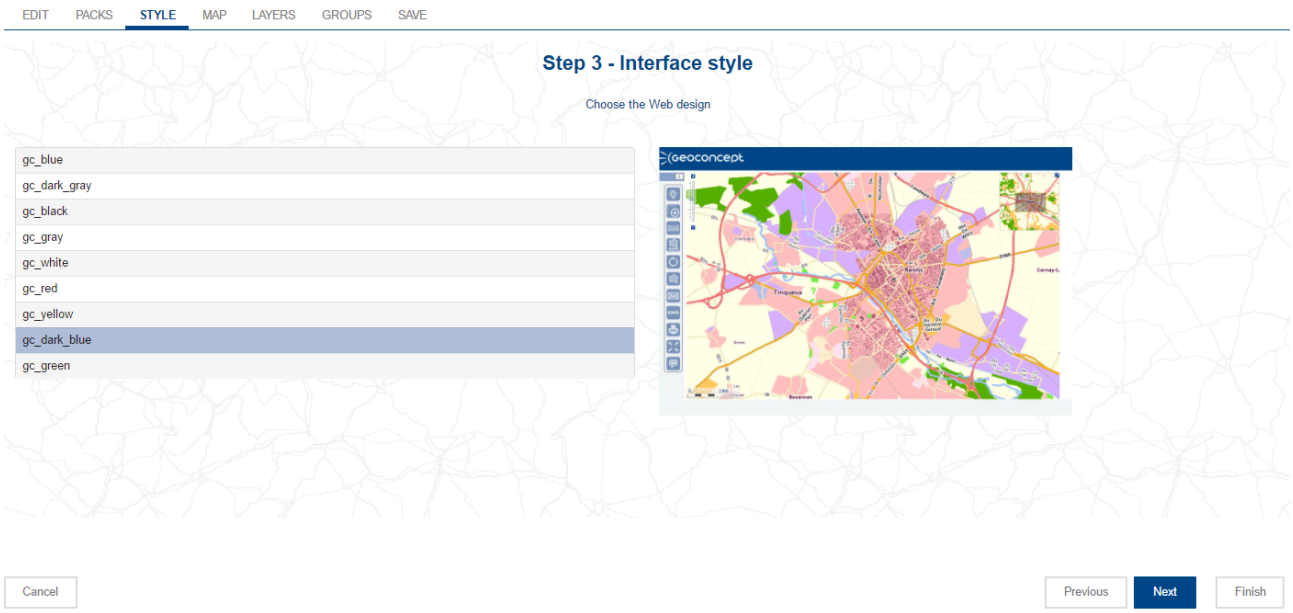
- Click on the Cancel button to exit from the assistant and cancel the project creation in progress or any changes made to an existing project,
- Click on Next to move on to the next step when editing an existing project. For a new project, the use of this button is only possible having first assigned values to the parameters requested,
- The Previous button allows you to return to the previous step, except to the first step,
- The Terminate button is available when editing an existing project; in this case, you can save the modifications made in relation to the last back-up of the project's parameters.

Step 2: Interface style

In this step the user selects a graphic design style for the web interface. By default, different colour ranges are suggested for the main page components (banners, background, inset panels, …).

Before the application will move on to the next step, a graphic style must be selected.

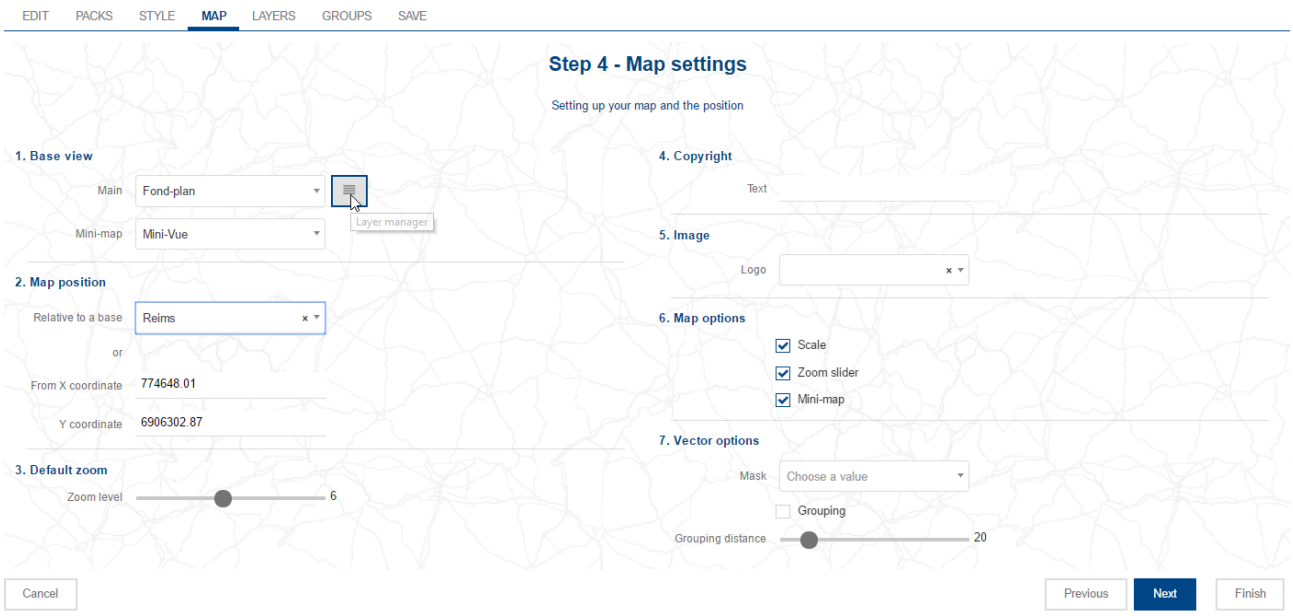
Choosing the interface style



It will be possible to create a custom style sheet via the Skin menu in the Administration tab. Some idea of CSS and an understanding of the components used in the web application are necessary to configure a comprehensive graphic design style, using the example supplied as a starting point (cf. graphic style for a custom portal).

Step 3: Configuration of the map

Choosing a Geoconcept map and associated parameter settings



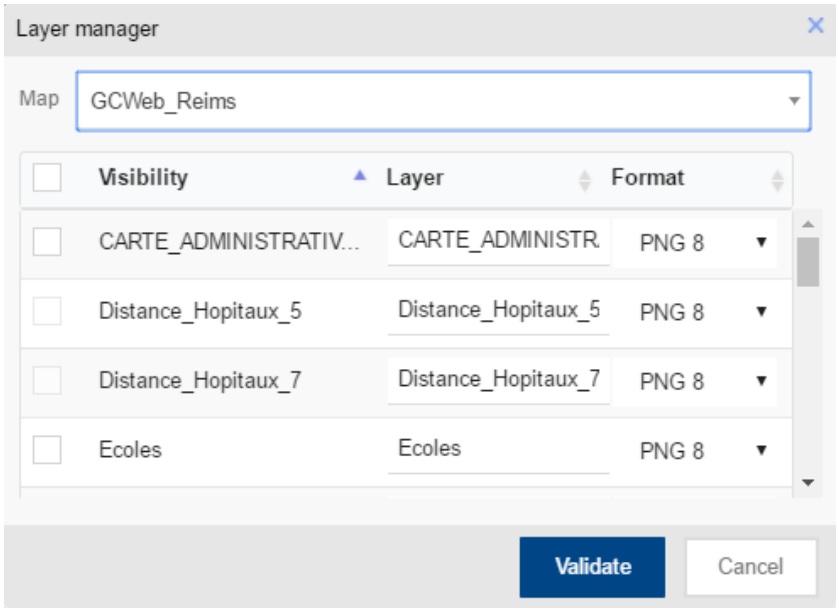
This step serves to select the Geoconcept map view tabs that will display in the web application, and to build the order in which they will appear in the cartographic portal.

Clicking on Handling layers ,the Geoconcept maps stored in the directory defined by the user displays.

When a map is chosen, it presents the various tabs that make it up. The user must then check the tabs they want to import, fill in a name and define the image format in which the layer(s) will be displayed: PNG 8, JPG, PNG 8 with transparency or again PNG 24.

From version 5.2 and upwards, an EMPTY layer is systematically suggested in the list of layers. This layer is a technical "empty" layer that is used among other things for the design of thematics.

Adding new layers via the wizard



Once this action has been carried out, the user will be able to define which view tab they want to define as the current layer (the first layer that will display when the portal is deployed), and which view tab will be used as a mini-map at the top right of the portal.

When a Geoconcept map is imported, the map positions are automatically retrieved, along with their respective coordinates and scale.

If the user wants to import other view tabs in the follow-on to the project (via the layers manager), they must add them using the Layer management button.

This manipulation makes the view tabs available selected in the layers manager (next step). This also creates a layer via the view tab in the Administration/Couches .

> In the drop-down menu Mini-map , the geographic layer chosen will automatically be duplicated in the Administration ‣ Layers ‣ Tiled layers menu. The name of this specific layer has the same name as the source layer, but with “@Minimap@” as an additional prefix. Layers of the @Minimap@ type possess specific configurations that should not be altered in any way. If a @Minimap@+name-of-layer layer is not used, it can be deleted.

The initial position can be chosen from the saved Geoconcept map positions. The zoom level, and the X, Y coordinates are automatically updated as a function of parameters for the position. This selection is mandatory.

A text copyright message and an image can be inserted in the web application. The administrator has the choice of adding text as copyright. They can also add an image from a stock of saved images in the web application (for more details about stored images, please refer to the relevant section of the documentation). This addition is optional.

However, by default, the logo displayed is that of Geoconcept. You should add your own logo to this step to customise your web site.

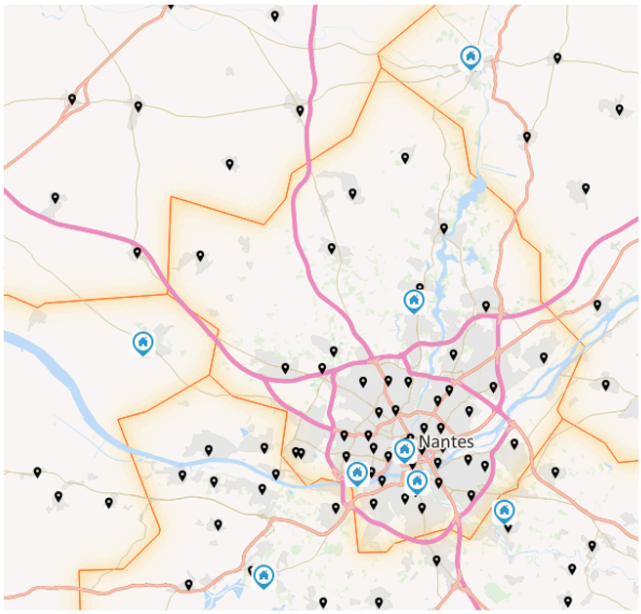
The graphic scale, the zoom slider and the mini-map displaying the global view can be enabled (by default) or disabled by checking or unchecking the corresponding check-box : they will then appear (or not) in the cartographic portal.

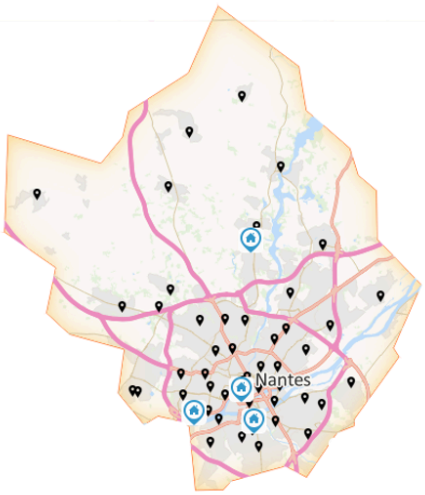
Finally, the 2 vector options:

- Mask

This functionality allows you to display the map exclusively on one geographic entity (department,town, … or grouping of towns or departments,…) displaying a "mask" on the other entities. Activation of this option utilises sectors (cf. the sector section).

Example of utilisation with and without a mask

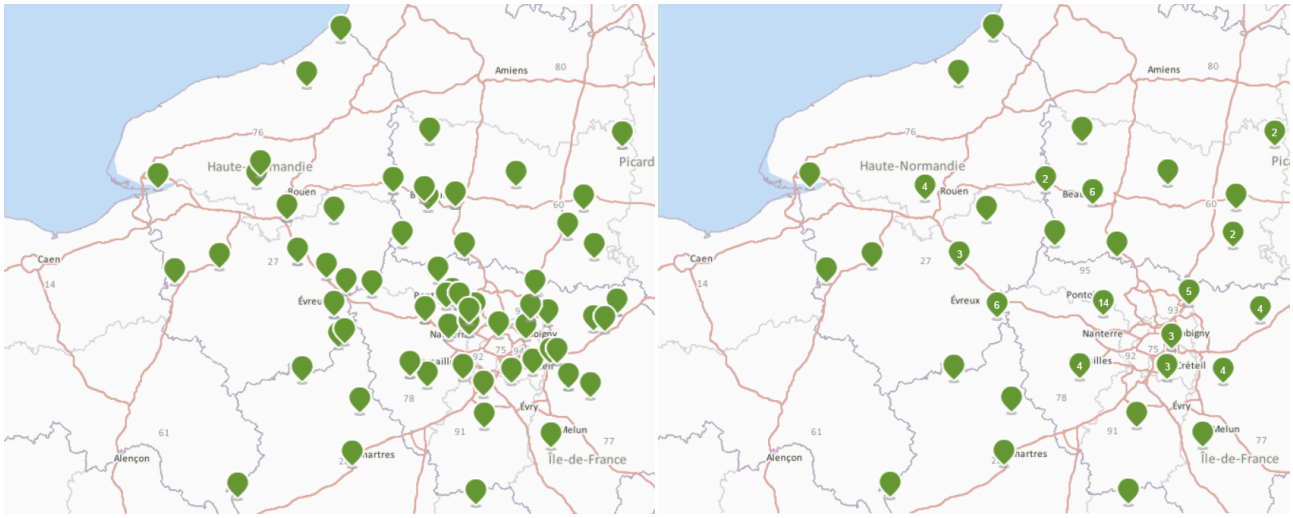




- Grouping

This functionality allows you to group point objects displayed in the portal as a function of geographic proximity, so as to be able to better distinguish between major concentrations of points. The Grouping distance serves to define, in pixels, the grouping distance.

Example with and without grouping



Activation of this functionality is applied to all point type vector layers for the portal.

(fr) Les tables où la géométrie est stockée dans un type GEOMETRY ne sont pas totalement supportées pour cette fonctionnalité, il est recommandé d'utiliser les types suivants : (POINT, MULTIPOLYGON, LINESTRING, POLYGON et MULTILINESTRING).

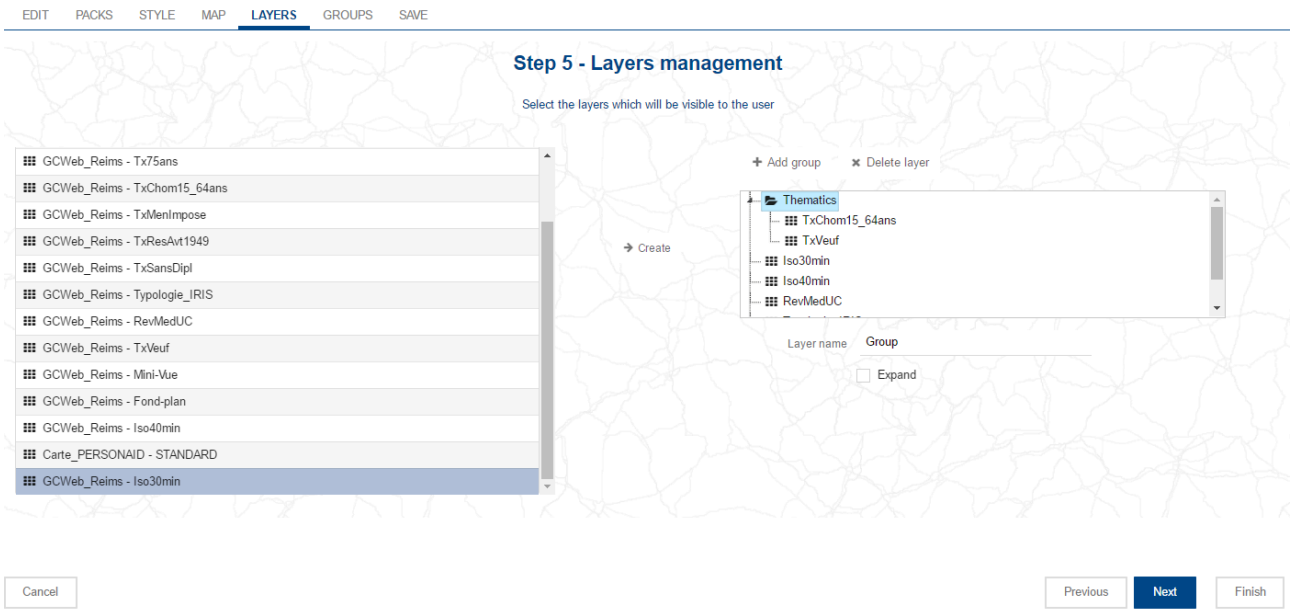
Step 4: Handling map layers

This step serves to select the Geoconcept map view tabs that will display in the web application, and to build the order in which they will appear in the cartographic portal.

This step must be with reference to the choice of layers manager used in the designer. Special attention will be given to this choice of a layers manager in the Composer, in this documentation.

The order of superposition configured in the layers manager will be that which is effective (enabled) in the mapping application in the case of the advanced layers manager. The layer situated highest in the manager, and enabled, will mask all the layers positioned below it.

Choice of layers to display



The procedure to follow to add a view tab to the cartographic portal is the following:

1. Layers can be added by selecting them in the window on the left: they are highlighted so you can see which are selected. Clicking again on the selected layer withdraws them from the selection. At the top, the search tool allows you to filter layers on filter name, when you enter the relevant characters to search for.
2. Click on Add to add the layer or layers selected in the layers manager.
3. The order for the layers can be specified by the administrator: thanks to the mouse, it can move the layers by dragging and dropping them to the place required in the ordering.
4. Clicking on the cross just beside the name of the layer deletes it from the layers manager so it will then no longer be available in the cartographic portal. A confirmation message displays.

Clicking on the layer allows its properties to be edited:

- Name of the layer: the name can be edited, replacing the name in the view tab assigned by default. Validate the modification using the Enter key on the keyboard,
- Visible: checking this check-box, this layer will be enabled by default in the layers manager; it will therefore be visible by default to the portal user on opening the portal.
- Dynamic: this option allows the user to withdraw tiles stored in the cache. The layer created in this way interrogates the Geoconcept map dynamically each time a client request occurs to supply the view tab with the current data. The advantage of this option lies in the fact that data regularly updated in the Geoconcept map will immediately become available in the mapping portal, without it being necessary to delete the cache on the server,

Dynamic layers are not suited to high traffic sites. In effect, this option should be used judiciously when the likely outcome is already known: since Geoconcept Web is called each time to calculate the image to send to the cartographic portal, it is important not to request supply of an image that is too voluminous. For example, you are advised not to configure background layers to be dynamic, to avoid overloading the server.

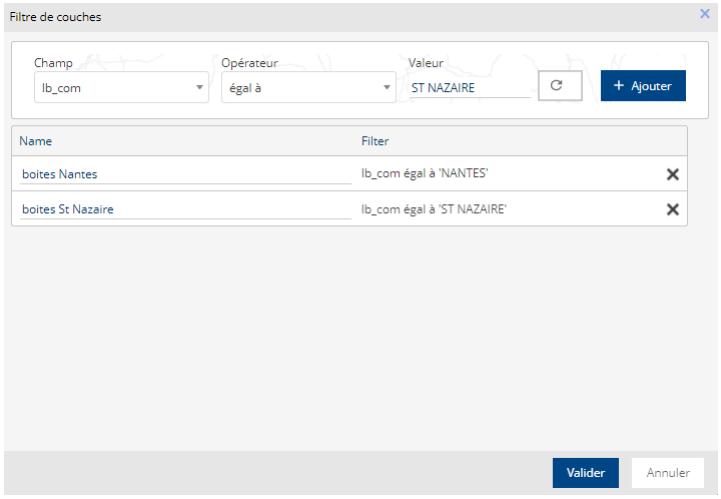
Tiled layers that are “classical” in comparison to dynamic layers are handled in an optimum way with the cache mechanism. This means the cache is stored on the server disk, in the memory cache of the server and in the client browser. The portal is therefore no longer called to display the map in the portal when the cache has already been calculated.

- Legend: checking this check-box will display the legend associated to this layer,
- Opacity: this is the value by default for the opacity of the layer in the mapping portal. It varies between 0 (transparent) and 100 (completely visible). This option is not used when the layer is defined to be non-visible. Conversely, as soon as the user enables the layer, it will take the value defined in this step,

Finally, the notion of group can be added to the layers manager:

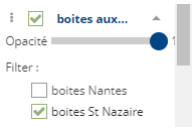
- Adding a group: a group enables different layers to be classified in a single entity; a layer can be added to a group simply by dragging and dropping it on a group. Clicking on the group, it is possible to give it a custom name, and to Roll out the layer so it is open when the portal opens, and to assign Visible and Dynamic properties to all the layers it contains.
- (fr) Filtre : ce bouton apparaît lorsqu’une couche vectorielle est sélectionnée. Il permet de définir un filtre d’affichage en choisissant un champ, un opérateur et une valeur à appliquer au filtre. Une fois ces paramètres choisis, il convient de cliquer sur le bouton Ajouter ; le filtre apparaît dans la liste des filtres. Il est possible de renommer un filtre.

(fr) Filtre sur une couche vectorielle



(fr) Les filtres créés dans l’assistant peuvent être choisis dans le gestionnaire de couches avancé.

(fr) Choix des filtres dans le gestionnaire de couches



Step 5: Managing groups for portal access

> This step will only play a role in the event that the Protect option has been enabled in the project management interface. If this is not the case, you can validate this step without making any changes.

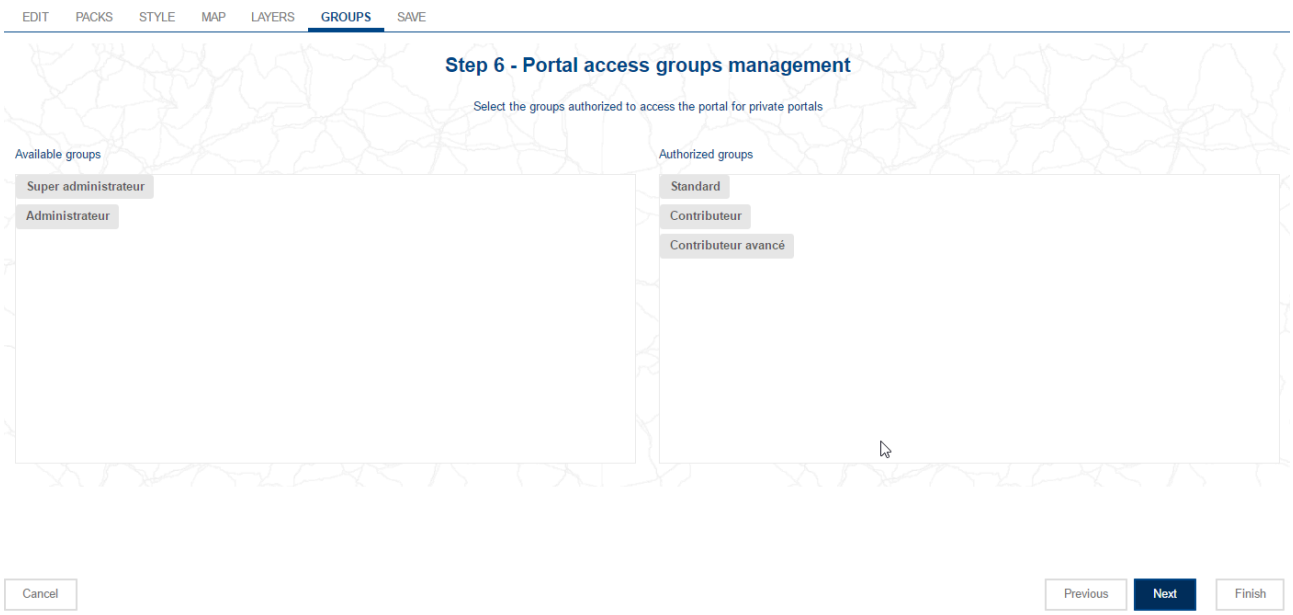
In the event that the Protect option has been enabled

> the cartographic portal is then protected by a secure connection page. Only a user known to the application can connect to the cartographic portal. This page makes it possible to restrict access to the users in groups that have been specified in this step.

Configuration of users and groups takes place in the Administration tab.

To add an authorised group, you have a list of all the groups available in the platform in the left-hand part of the screen. When a group is selected, it is highlighted. The Add and Delete buttons can be used to move them between the left-hand and the right-hand parts of the screen.

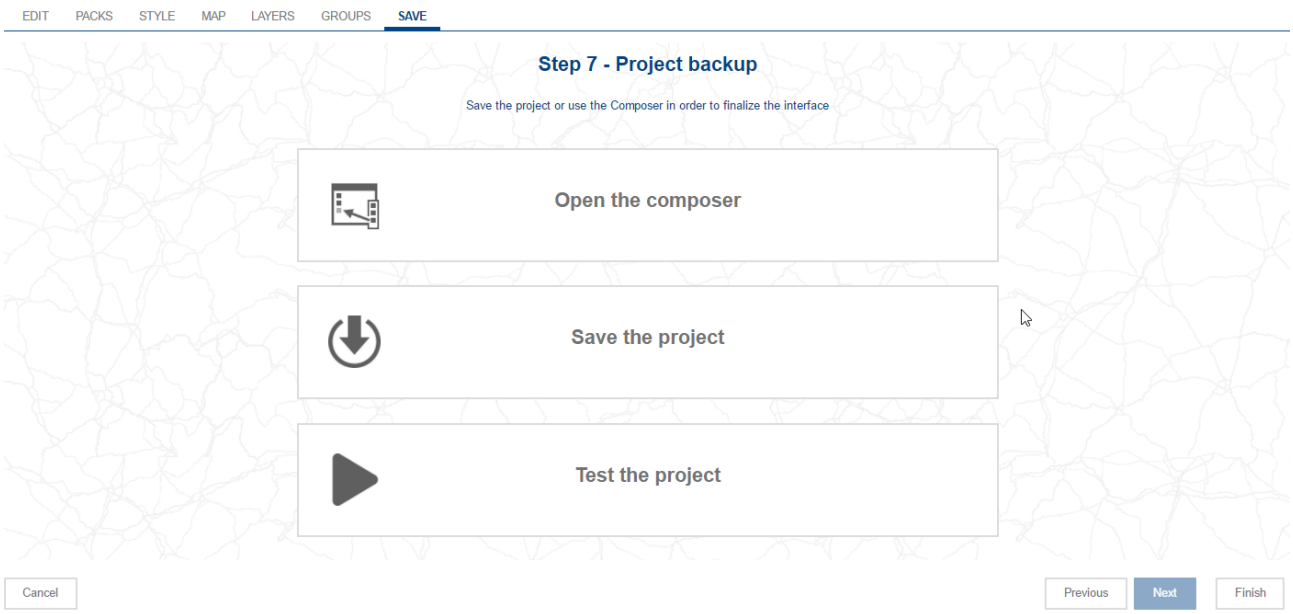
Managing groups for portal access



Step 6: Project backup

The last step of the assistant offers three possibilities to the would-be web site creator:

Save the project or use the interface Composer



- Open the Composer: this button opens the Composer interface: it opens a template of the web site constructed from parameters specified in the wizard. This enables the portal creator to add the required functionalities from the library of available widgets,
- Save the project: this button saves the configuration of the parameters as decided by the creator of the cartographic portal. The functionalities available in the interface will be those selected via the choice of the pack in step 2,
- Test the project: this button opens the site in a new tab in the browser, such as it will be deployed in the current status of the configuration.

The Test the project button does not back-up the project in progress.

The Composer

The interface Composer is accessible from the wizard via the following button:

Button to access the Composer

This opens a mock-up or template of the site configured in the wizard (graphic design style, map, current view). Depending on the choices made in the wizard, some of the functionalities are already present in the interface.

Description of the Composer

The map in the centre is circled:

- at the top, by a banner that contains the logo,
- at the sides, retractable zones in which widgets can be stored,
- on the right, a retractable toolbox in which the user can choose those widgets to be made available in the portal, configure them, delete them and apply certain actions (managing portal properties, return to the Wizard, testing the project, or saving operations).

A library of widgets is present in a window managed by a system of accordians. This library contains all widgets available to be added to the application. These widgets are classified by category.

Widgets developed by companies other than Geoconcept should be included in this library so the normal operating of the site is respected, and to benefit from the functionalities offered by the Composer. A dedicated guide is available to developers so the specifications required can be defined for the addition of new widgets.

Functioning of the Composer

The underlying principle of the Composer is to put different functionalities into the cartographic interface, taking them from the library by dragging and dropping them with the mouse.

Widgets can be placed in the retractable panels to the left and to the right of the map, in the upper banner or directly on the map. The positioning of the widgets in the Composer is saved when the project is saved, and the configuration will subsequently be active in the cartographic portal.

Widgets library

The widgets are classified by category in the library. Each category can be rolled out by clicking on the name or on the arrow pointing downwards:

Widgets library operation

This will enable display of all widgets in the category. When the second category is unrolled, the first one closes up. Click on the drawing pin to conserve the open category, even in the case of the opening of a second category.

The Composer enables positioning of the functionalities / widgets that are available in the library at the desired position by dragging and dropping between the library and the chosen place. This drag and drop is applied with the mouse. The Panel widget provides a functionality for organising the functions so they are structured appropriately.

The Pane and Widget Aggregation widgets in the Widget configuration category provide functionalities for customising the way the widgets are arranged on the screen.

The widgets are available following the Geoconcept Web version used. The widgets list used version by version is detailed in the annex Differences between versions of Geoconcept Web.

To delete a widget, select it and then click on the

icon.

Types of widget

The widgets are mostly represented by square icons. But some of them assume special shapes that correspond to the action they engender:

- Pane: container for storing widgets;

- Text scale: displays in the portal, according to how it is configured, either in text or list format;
- Simple layer manager and Advanced layer manager: these two widgets have different appearances to enable the user to choose the mode they want to use to manage layers;
- Geocoder: input field for the search;
- Route: several input fields for route calculation;
- Positions history and Notes: each of these are represented by two square icons;
- Saved queries and Positions: these two widgets take the form of a drop-down list;
- Object list: the widget takes the form of a menu representing the different categories. In the mapping portal, this menu rolls out the types of object present in each category;
- The different elements constructed with the Text widget: displays in the form of the text elements entered.

Widget properties

Properties are accessible for each of the widgets by first selecting them in the Composer, and then clicking on the

icon available in the widgets library.

The following properties are common to all widgets. They allow the user to:

- Default tool (depending on the type of widget): this allows you to specify that the widget in question will be activated by default when a user arrives on the mapping portal;
- Button image (depending on the type of widget): choose an image to represent the functionality;
- Label: display a name above the widget;
- Label name: customise the name given to the widget;
- Button tooltip: text appearing when hovering over the button;
- Label separator (depending on the type of widget: routes, address search, …): allows you to add a separation hyphen between the label and the functionality;
- Window anchor: This aims to define the corner of the screen that will be the origin of the screen marker in which the widget will be placed. By default, the anchorage is defined as "top left". When the browser window is reduced, you can see that the widgets follow the corner of the defined window defined;

Take care nevertheless, when designing a portal, to reduce the project window in size as far as possible, as otherwise the widgets will end up overlapping with each other.

The following keyboard actions are available in the portals:

- Enter validates a dialogue (equivalent to clicking on "OK").

- Esc closes a dialogue in the widgets concerned (PDF, Sharing, …), in this case no action is applied.

Mobile properties of widgets

The properties in the Mobile tab may vary as a function of the widgets they relate to. They allow you to:

- Label name: customise the label given to the widget in the mobile portal.
- Mobile version activated: display the widget in mobile portal;
- Enabled by default: activates the operation of the widget on loading of the mobile portal;
- Rapid access: display the widget at the bottom left of the mobile portal (without using the menu). It is only possible to choose one widget to place in rapid access mode.

Portal properties

The

icon provides access to the global properties for the portal, as described below:

Portal tab

- Activate the responsive portal: allows you to activate the responsive version of the portal, in order to consult the portal in a mode that is suited to the mobile terminal screen size (tablet, smartphone). For more details, consult the following chapter: Mobile portal / responsive;
- Responsive portal width: defines the threshold, in pixels, below which the portal switches automatically into mobile mode. If the screen width of the terminal is lower than the value defined, the portal is displayed in its mobile version, and if not, it is the classical version of the portal that is displayed;
- Activate automatic portal update: allows you to refresh the content of the portal automatically, without any action on the part of users;
- Time interval between updates: defines the refresh time interval activated by the preceding option;

Contextual menu tab

It is in this tab that the contextual menu is configured. It is accessible with a right-click on a classical portal or with a long click and hold on the touch screen.

On mobile terminals, only the "More info on this place" item is available.

- Contextual menu options: items for display in the contextual menu can be chosen from the list using the CTRL key on the keyboard;
  - Home page: same behaviour as the home page widget;
  - Centre the map here: centre the map on the position of the mouse-click;

- More info on this place: displays the postal address nearest to the position of the click. This option requires configuration of a graph;
- Display coordinates: displays coordinates on the position of the mouse-click;
- From this point: enter the start point for the route. This option requires configuration of a graph;
- Up to this point: enter the start point for the route. This option requires configuration of a graph;

- Labels: Allows you to modify the labels on each item in the contextual menu.

Mobile tab

It is in this tab that copyright and scale display options are configured in mobile mode.

- Display scale: Displays the scale at the bottom of the screen in mobile mode;
- Display copyright: Displays the copyright at the bottom of the screen in mobile mode.

Mobile Widget

It is from this window, at the bottom left of the composer, that it is possible to dedicate Widgets, or Widgets with a different configuration, to mobile versions of the portal. This can be used in conjunction with the `Mobile version activated` parameter in the Mobile tab in the properties of each Widget.

For more details, consult the chapter Mobile / Responsive Portal.

Widgets

Page layout Widgets

Widgets in the Page layout category

Pane

This widget does not offer any functionalities to speak of. It allows the administrator to have access to a tool for classifying and grouping widgets in a well-defined structure. Certain properties can be applied to this widget and are listed below;

Properties:

- Visible : serves to show the outline (border) and the background of the pane in the cartographic portal
- Background colour : this allows you to customise each panel of widgets independently, defining a background colour via a colour palette (Color Picker).

Widget aggregation

The purpose of this widget is to facilitate the manipulation of widgets by suggesting how to regroup them.

Position the Aggregation widget in the portal, and then move the selected widgets on to it. Click on the

icon to view the group of aggregated widgets and edit their properties. To delete a widget from the aggregate group, simply select it and click on the trash can in the Composer .

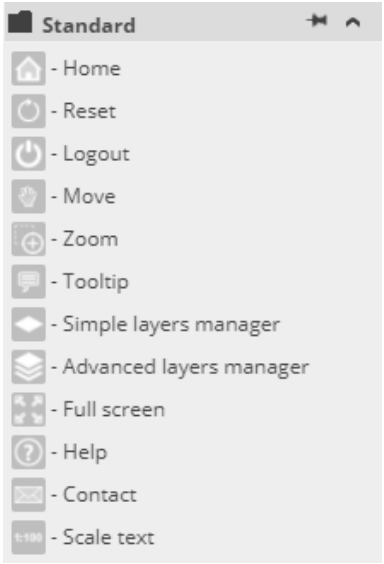
Properties:

- Number of columns : this enables you to choose the display used for the different tools as a function of the number of columns.
- Orientation : orientation of the window containing these functionalities, deployment on the right-hand or the left-hand .

Aggregation Widget at 5 columns and with a Right-hand orientation

Standard Widgets

Standard category widgets



Home

Available in mobile/responsive mode.

The Home Page widget allows the user to return to the initial status of their mapping portal in terms of geographic position. If the user has consulted many different positions at different zoom levels, the simple fact of clicking on this functionality will bring them back to the initial view of the portal.

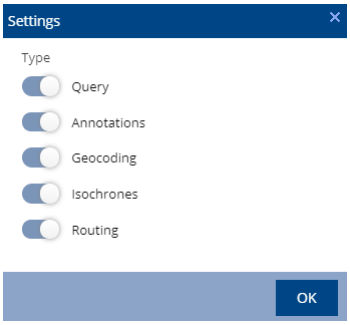
The initial view corresponds to parameters that have been defined during step 4 of the mapping portal creation Wizard; the user indicates in the drop-down menu containing positions inherited from their Geoconcept map, whether they want the first connection to display a global view of the map, or one map position in particular.

Reset

Available in mobile/responsive mode.

This button allows you to delete all the temporary elements displayed in the map, such as the vector objects, measurements of distances or areas, the drawing of polygons or even selections made. The option Enable selective reset of widgets allows to choose which widgets must be reinitialized (Query, Annotations, Geocoding, Isochrons, Route).

Reset widget settings



Disconnection

Available in mobile/responsive mode.

This functionality allows the user to exit from the portal and switch to a new internet page.

Properties:

- redirection address : supplies an internet address mentioning the section "http://…" for example: http://www.geoconcept.com.

Pan

Activating this widget allows you to move around the map using the mouse.

Zoom

Activating this widget allows you to apply a zoom to a rectangle plotted using the mouse in the web application. The facility to zoom with the mouse wheel and with the zoom cursor are available at any time in the application.

Infobox

> Available in mobile/responsive mode.

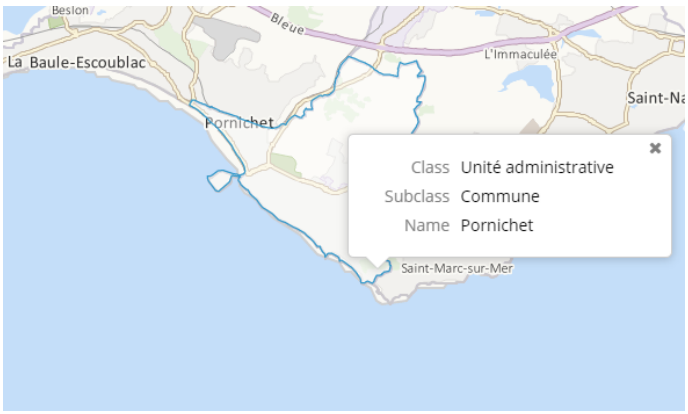
This functionality allows the user to exit from the portal and switch to a new internet page.

(fr) L'infobulle autorise la navigation entre les différents objets trouvés sous le clic ou en survol. Dans le coin inférieur droit de l'infobulle, quatre boutons permettent la navigation d'un objet à l'autre. Les deux flèches centrales ont pour rôle de faire défiler les objets un à un tandis que les flèches extérieures permettent d'accéder rapidement au premier ou au dernier des objets.

(fr) Exemple d'affichage d'une mini-fiche si plusieurs objets trouvés

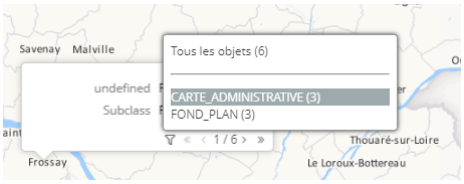
In addition, for objects stored in the Geoconcept map, it is possible to automatically retrieve the geometry of the object selected for it to display over the rasterised map.

Example of the display of an infobox with retrieval of the geometry



(fr) La consultation des fiches peut être filtrée en fonction des couches affichées dans le portail pour ne choisir que les fiches d'objets appartenant à une couche en particulier.

(fr) Filtre sur les infobulles



Properties:

- Report : (cf. Report Widget);
- Display geometry : to display the geometry of objects, it will be necessary to also enable the Identifier field in the Geoconcept infobox (it will not appear in the attributed form of the object).
- Display an infobox when the mouse passes over it : this option will allow activation of the infobox by simply passing over it, without clicking in the map.
- (fr) Epaisseur de la bordure / de la ligne : cette option permet de faire varier l'épaisseur du contour ou de la ligne de l'objet inspecté (si l'option Afficher la géométrie est cochée).
- (fr) Couleur : permet de choisir la couleur de l'objet inspecté.
- (fr) Utiliser des popups ayant une position fixe à l'écran permet de déporter l'infobulle affichée. La position initiale de l'infobulle est à définir (bas gauche, bas droit, haut gauche ou haut droit). Cette infobulle peut ensuite être déplacée sur la carte. Ce paramètre ne peut pas être combiné à l'option Afficher une infobulle en survol.

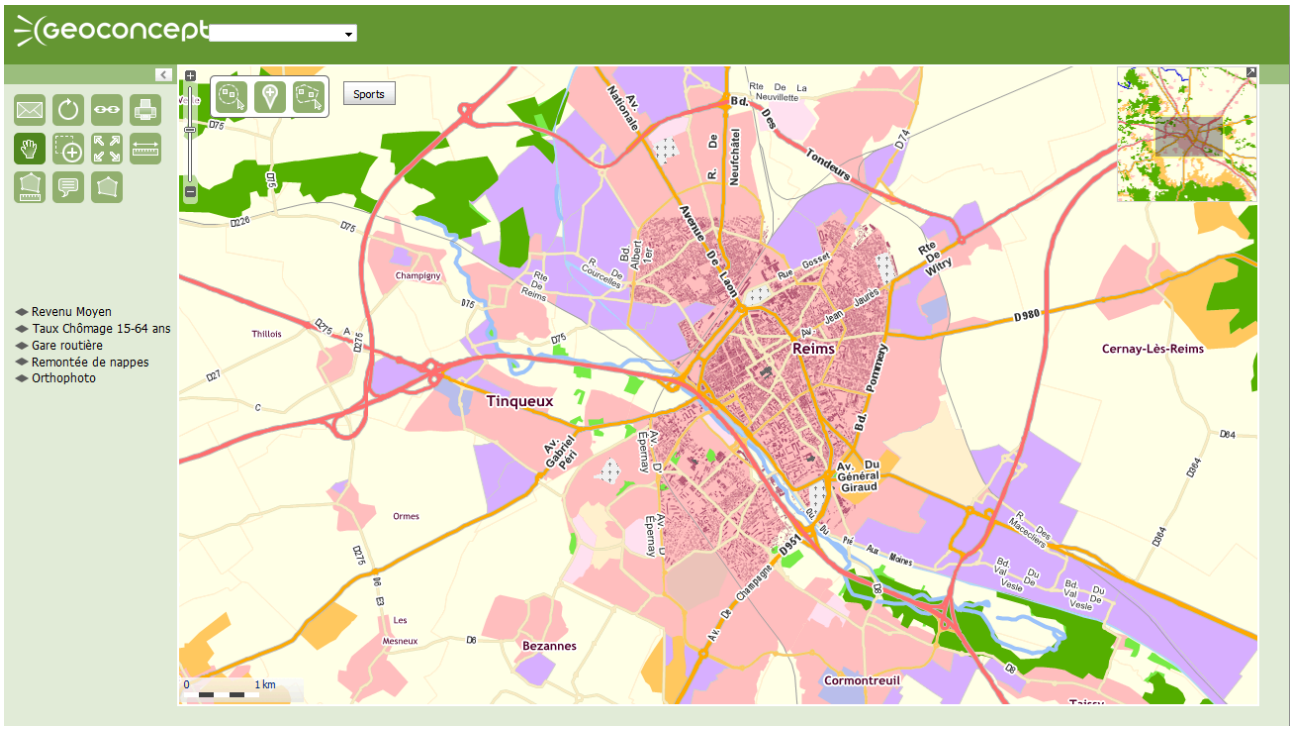
Single layer manager

This widget serves to add a Layers manager. The layers are those defined in the Wizard. Through the intermediary of ths layers manager, the end user can choose the layer they want to display and refine and adjust its transparency.

The layers display exclusively. There are two possible scenarios:

- no group has been defined in the Wizard: all the layers appear at the place where the widget has been positioned. A click on a layer opens it in the portal.

Single layer manager without creation of groups



- a series of groups have been defined: the name of the group appears at the place where the widget has been positioned. A click on one of the groups opens the list of available layers. The screen is divided up into as many layers as there are layers defined (if only one layer has been defined in a group, the layer displays directly). A click on a layer opens it in the portal.

A Simple layer manager with creation of groups

In both cases, a horizontal slider allows you to navigate between the layer defined in the current view and the selected layer.

Properties:

- Automatic legend : (cf. the chapter dedicated to Legends).

Advanced layers manager

Available in mobile/responsive mode.

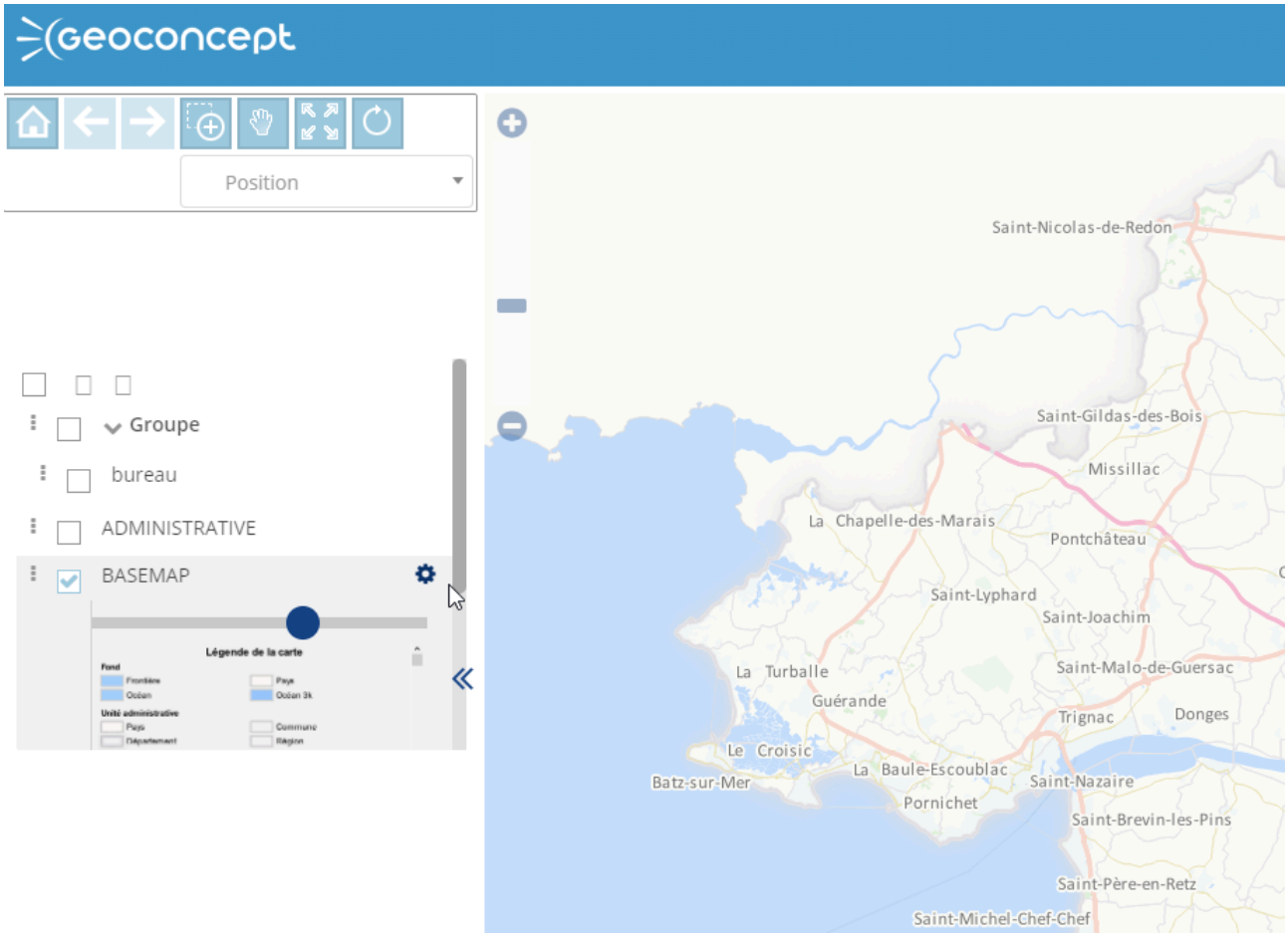
This widget allows you to add a layer manager. The layers are those defined in the Wizard. Via the intermediary of this layers manager, the end user will be able to choose the layer or layers they want to display, the order or sequence in which they appear, and then adjust their opacity to achieve the desired effect.

This is a layers manager with a succession of layers that can be enabled as required by checking the relevant check-box. It will be possible to superpose several layers, one on top of another. The order of the layers can be modified by the end user.

Functionalities:

- Display or mask all layers with the check-box at the top of the layer manager
- Display or mask all layers at the level of the group with the check-box in front of the group name
- Fold or unfold all the groups and layers using + and - at the top of the layer manager
- (fr) Afficher une couche selon un filtre : les filtres peuvent être créés dans l'assistant (onglet Couches)
- Re-order groups / layers using the
  tool
- Display all layer information by clicking on
  (opacity, metadata, legend)

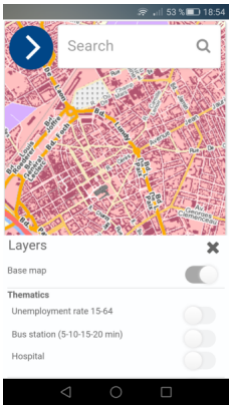
Preview in the advanced layers manager



Mobile

This Widget is available in mobile mode, it has a specific interface that does not allow any changes to be made to the order and transparency of the layers.

Preview in the advanced layers manager on mobile



Properties:

- Save the map views : allows users, if the property is enabled, to be able to save their own map views while adjusting how they are displayed, the order and level of transparency for each layer. These configurations are saved in the user contexts, and can be managed from the context menu.
- Automatic legend : (cf. the chapter dedicated to Legends).
- Metadata label : Name of the link displayed in the layer manager. Default “link”.

The url for metadata is defined in the Administration ‣ Layers ‣ Tiled layers ‣ Layer definition page for tiled layers, Administration ‣ Layers ‣ Vector layers ‣ Single layer info for vector layers, or Administration ‣ Layers ‣ Composite layers ‣ Group info for groups of layers, under metadata url. If the url has no value assigned to it, the “link” is not displayed in the layer manager.

- Height : Height of the layer manager, defined as a percentage (eg 100percent) or in pixels (eg 400px). If the layer manager exceeds the defined height, a scroll bar displays.
- Width : Width of the layer manager, defined as a percentage (eg 100percent) or in pixels (eg 400px)
- Automatic legend size : Enables optimization of the legend image display.

Full screen

This widget provides a functionality for switching the mapping application into full screen mode.

Help

Available in mobile/responsive mode.

This widget enables users consulting a mapping portal to have access to a specific document. The addition of the document is defined in Documents lateral menu.

Once the map portal has been published, users can download the document with a click on the widget.

Properties:

- Document : allows you to choose the document to associate to the widget.

You can associate all types of documents: PDF, Image, Word / Excel / TXT files, etc.

Contact

Available in mobile/responsive mode.

This functionality opens the messaging client to send an email to a contact, the email address for which, by default, has been configured in the @(Administration / Settings / Widgets / Mail / Administrator mail portal) menu@ section.

Properties:

- Mail : allows you to customize the email recipient.

Text scale

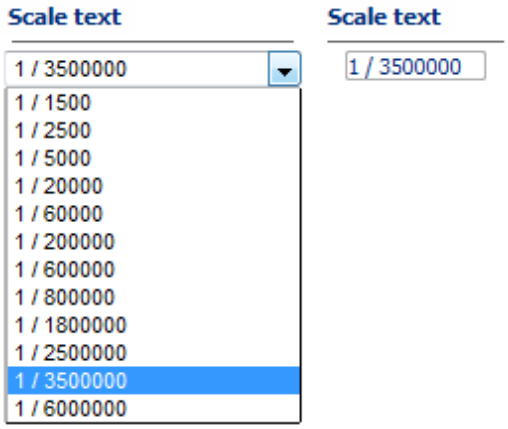
Available in mobile/responsive mode.

The Text scale is a functionality that completes the graphic scale proposed by default when publishing a portal (it is located at the bottom left of the screen).

This Text Scale breaks down into two modes:

- the first in the form of a simple text display. Depending on the level of zoom at which the user finds themselves, the text zone indicates the scale in numeric format that will have been configured previously in the Geoconcept map via the user's desktop solution.
- the second in the form of a list summarising all the scales configured as a function of the zoom level, as in the desktop version of Geoconcept. There are therefore 12 scales corresponding to the 12 levels of zoom that are proposed to the user.

Display of the Text scale widget in text format and in list format

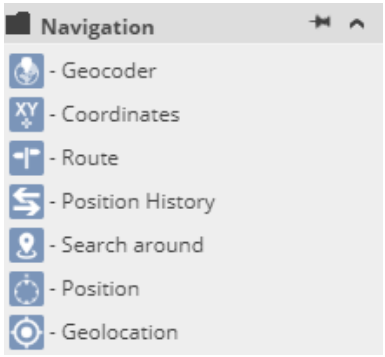


Properties:

- In the Composer, the user can simply activate the display of the widget in the form of text or list .

Navigation widget

Widgets in the Navigation category



Geocoder

- A reference table or activation of an external service (Bing, Here, …) is required.
- TO use autocompletion, certain files are required. These files can be supplied by Geoconcept, but it is also possible to generate your own autocompletion files from your map data, see the appendix autocompletion.
- Autocompletion files generated by versions of Geoconcept Web earlier than 6.0 are no longer compatible with this version. To continue to use this function you will need to either generate the files following the instructions given in the autocompletion, appendix, or to request them from GEOCONCEPT.

Available in mobile/responsive mode.

Configuration of the widget

In the Administration ‣ Parameters section, you will need to indicate certain parameters for the widget to function correctly. Here, in the ***'Geocoding'*** directory, this means you will need to supply the following:

- datasource : name of the reference table, for example: “TableRef_France2020.ugc.mdi”,

and/or

- “Geocoder.bing.”, “Geocoder.here.”, …

This module enables the user to centre the map on an address that they will have entered earlier in the appropriate field.

The Geocoder widget can be configured in two ways:

- the user fills an Address field, and validates;
- the user inputs their address in a free field, and in parallel, the autocomplete module suggests a series of close match results as the text is input at the keyboard.

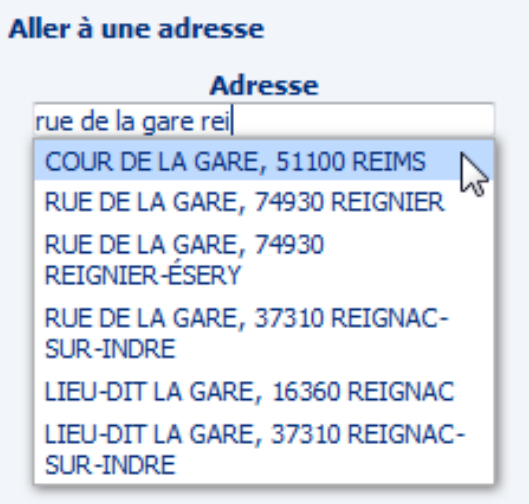
The configuration of the operating mode takes place in the widget properties.

For versions of Geoconcept Web later than version 5.2 it will be possible to specify several geocoding repositories, either one per country, or one per object typology (towns, management teams, …). Reminder: the Geoconcept Web Enterprise version is supplied with UGC Builder, that allows design of geocoding repositories).

Properties:

- Default zoom : defines the level of zoom desired when the result of geocoding is displayed on the map.
- Display :
  - classical: the user should enter the component items making up the address that are known (street number, street name, post code and/or town name) and then click on OK to display a list of results that match the terms indicated,
  - Autocomplete: when you select this option, the tool will suggest a list of results as the input takes place. Files of data to aliment the autocomplete function will, of course, be needed, as will the reference table,
- Default town : limits the search to one particular town,
- Default Post code : the same thing for a default town. This allows you to focus your search on a particular post code. By indicating only the two first figures of a post code, the searches are centred on the defined department.
- Field size : the dimensions of fields displayed can be configured by increasing or reducing the value.
- Definition of country : allows the user to choose from the different configured repositories configured by the administrator. For more details, consult the chapter entitled World geocoding.
- Multiple fields : this allows you apply geocoding to individual components of an address being searched for (Address, Post code, Town) in a separate field. Each component can be activated independently of the others. This makes it possible, for example, to search on the Post code alone.

Autocomplete result



Coordinates

Available in mobile/responsive mode.

This is a widget enabling retrieval of the position of the mouse cursor and display of the coordinates. The administrator must define whether the user retrieves the coordinates of the point clicked, or the coordinates of a flyover. They must then specify the projection systems that the user could choose. By default, the coordinates displayed will be those of the current map.

If no system is chosen in this drop-down list, the coordinates will be displayed in the map's system.

Properties:

- Display : allows a choice between Flyover or Mouse-click mouse modes.
- Mode de bouton : allows you to choose the widget's behaviour: Tool the widget is closed when another widget is used, Switch the widget remains active when another widget is used.
- Choice of projections : allows you to choose the projection systems (more than 50) made available to the user: WGS 84, Lambert II Extended, Lambert 93, NTF, RGF93, Google Mercator, DFCI, MGRS, or even the different UTM zones.
- Mobile Choice of projections tab: enables a choice of the projection system, among those proposed, for mobile usage.

Route

A graph or road network is necessary.

Available in mobile/responsive mode. For the specificities particular to this widget, consult the chapter called Mobile.

Configuration of the widget

In the Administration ▸ Parameters section, you will need to indicate certain parameters for the widget to function correctly. Here, in the ***'Route Calculation***' directory, this means you will need to supply the following:

- graphname: name of the road graph to exploit, for example: “Graphe_France_2014.siti”,

This widget allows you to calculate a route between two points, adding if needed, extra intermediate route stops. The route calculated displays on the map in highlighted form, accompanied by a route sheet that summarises the various road sections to be followed.

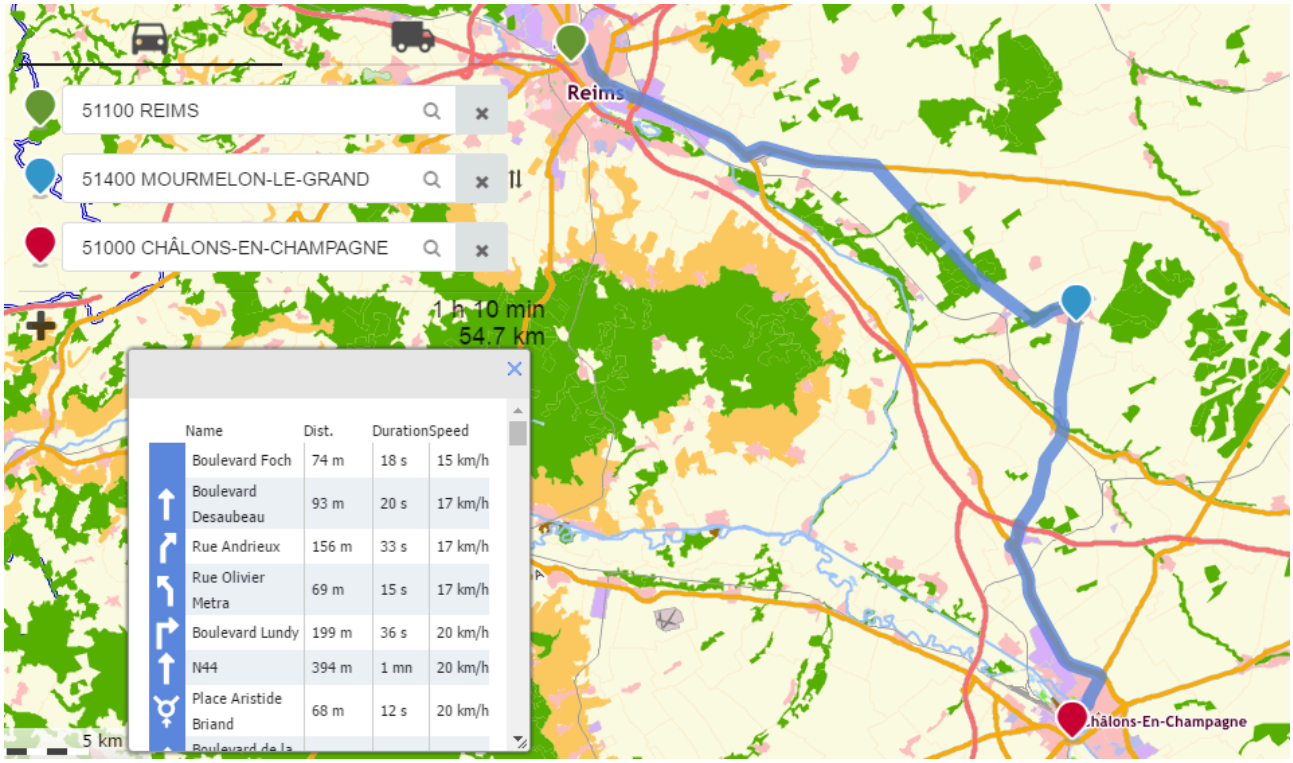
There are two possible methods for creating a route;

- with a click / drag-and-drop: hold down the left click of the mouse, and then move the green flag in the direction of the desired start point, then perform the same operation with the red flag in order to show the finish point. As soon as the click is no longer maintained in the hold-down position, the journey is automatically calculated.
- entering addresses: fill the start address and finish address fields.

To add intermediate steps: perform a preliminary calculation and then click on the + button as many times as necessary.

From version 5.2 of Geoconcept Web and upwards, it is possible to specify several graphs and/or several vehicle profiles. The user then chooses the graph/profile of the vehicle desired in the interface, materialised by an icon. Reminder: the Geoconcept Enterprise desktop version allows you to construct graphs for the calculation of routes (.SITI).

Preview of the result of an itinerary calculation



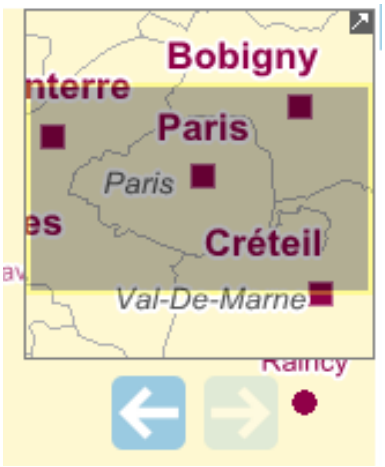
Properties:

- Display : allows you to choose from the 2 address input modes (standard or autocomplete). For the autocomplete mode, it will be necessary to have access to the files relating to the autocomplete function;
- Field size : allows you to define the widget width;
- default Zoom : defines the level of zoom desired when the geocoding result is displayed on the map;
- Profiles : authorises the user to choose from several different graphs configured by the administrator. For more information consult the section called Road networks.

Positions History

This widget takes you back to places consulted during a navigation session in the mapping portal.

Description of the «position history» widget



Properties:

- Max size of the list : you can define the number of possible «returns». Indicate the maximum size of the list summarising all positions archived.
- Double-click to display all previous positions : the user can also make the list of all the positions consulted appear with a double click.

Position

Available in mobile/responsive mode.

This widget is not a button, but a drop-down list that suggests all saved map positions in the current Geoconcept map. If the user clicks on a position, the map is centred on that position.

Properties:

- Create positions : authorises users, if the property is enabled, to create positions. These positions are saved in the user contexts and are administered from the context menu;
- Edit coordinates : authorises users, if the property is enabled, to edit the coordinates;
- Edit the scale : authorises users, if the property is enabled, to change the zoom level;
- Multiproject access : authorises users, if the property is enabled, to save in the group of available projects. In the reverse scenario, the position is only saved in the current project.

Search around

Available in mobile/responsive mode.

This widget allows you to search around the centre of the screen (or around my position if the Geoclocalization widget is enabled) for objects sourced by vector layers previously chosen in the widget settings. The centre of the screen can be materialised with an activated cross thanks to the Centre widget.

The appearance of objects found via this search, depends on a default style (default style for a search around).

If the required style needs labels (via an SLD configuration) you will need to enable the corresponding fields in the definition of vector layer fields, by clicking on Display.

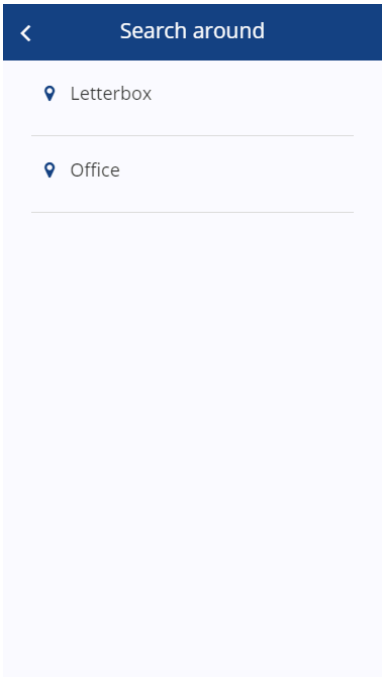
Properties:

- Active layers : choose the vector layers containing the objects to search for;
- Limit results to : set a limit on the number of objects;
- Name field : enter the name of the field enabling display of the name field for the objects. Take care that the field name respects the database syntax;
- Address field : enter the name of the field enabling display of the address field for the objects. Take care that the field name respects the database syntax;

The Name and Address fields of several layers in the database must be named in the same way to ensure these two information items are displayed in the information form.

When the widget is activated, a first window prompts you to choose in which layer the user wants to find the objects in the case of several vector layers.

Search around widget: choice of the objects to search for



The list of objects found nearby appears. One click on one of the lines in this list allows you to view the object and activate the infobox.

Properties in mobile mode: Once the layer has been chosen, the result number of objects found appears at the lower edge of the screen, along with a Display the list button. When you click on Display the list, a list appears showing for all objects, the name of the object, and the distance to it.

Search around widget: list of objects found

Clicking on one of the lines in this list provides access to the object information form and a view of all attributed information available for the object.

Search around widget: information on an object

The Display the map button shows the position of the chosen object on the map. The Navigation button allows you to transfer the position of the object to a browsing application already installed on the terminal (Google Maps, Waze, HERE Maps, …).

The X button at the top right allows you to exit from this search and return to the Home screen.

Geolocalisation

Available in mobile/responsive mode.

Please note that due to a change in behaviour in the latest versions of most browsers, this widget will only function on portals using the https protocol.

This widget centres the map on the current user position. It can be used both on traditional type portals and on mobile terminals using either HTML 5 tags, or information about positions supplied by WiFi routers or again by GPS coordinates returned by various devices. A click on the widget or pressing on it will activate or de-activate it.

The specific configuration for mobile terminals is defined in Widgets mobile window.

Properties:

- Zoom level : defines the level of zoom required when using the geolocalisation function.

Properties of the mobile tab:

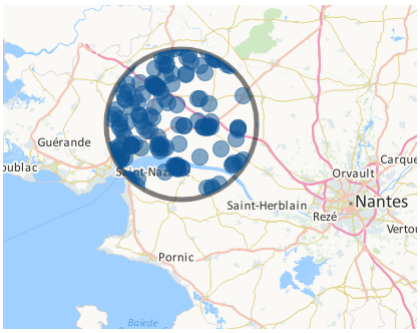
- Activated by default : activates tracking when the mobile portal is loaded. This has the effect of automatically centering the map on the position of the terminal on opening the portal.

Layer spy

Available in mobile/responsive mode.

This widget serves to display a layer that is not displayed. On activation of this widget a circle (porthole) follows the movement of the mouse and appears on the map.

Layer spy widget

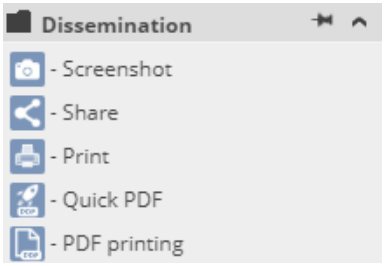


Properties:

- Porthole size : allows selection of the porthole size (small, standard, or large) allowing you to see the sub-adjacent layer.
- Select the layer to analyse : the chosen layer will appear in the porthole when the widget is activated.

Communication, or publishing widgets

Widgets in the Publishing category



Screen shot

Available in mobile/responsive mode.

Configuration of the widget

Creating the screen shots requires certain parameters. By default, the Geoconcept web installer creates the parameters and the necessary sub-directories under “C:\Geoconcept Web” designated as “<DATA_HOME>” below. These filepaths can be changed by modifying the following values in the Administration ‣ Settings ‣ Widgets ‣ Document section.

- Documents path directory indicate the full filepath to the directory in which the screen shots generated are temporarily stored, default: “<DATA_HOME>\data\documents”,

When using a large number of images and/or formats the consume large amounts of memory (BMP,…) in particular if the portal displays rasster images (scan, orthophotos, …), it can pove necessary to increase the size of exchange files from the administration console in Geoconcept Web Map. In the tsb *General* section *Settings* Increase default value 4096 to 409600 or more, and restart the Geoconcept Web Map Service. Exercize caution, however, if there is a high number of users with simultaneous access.

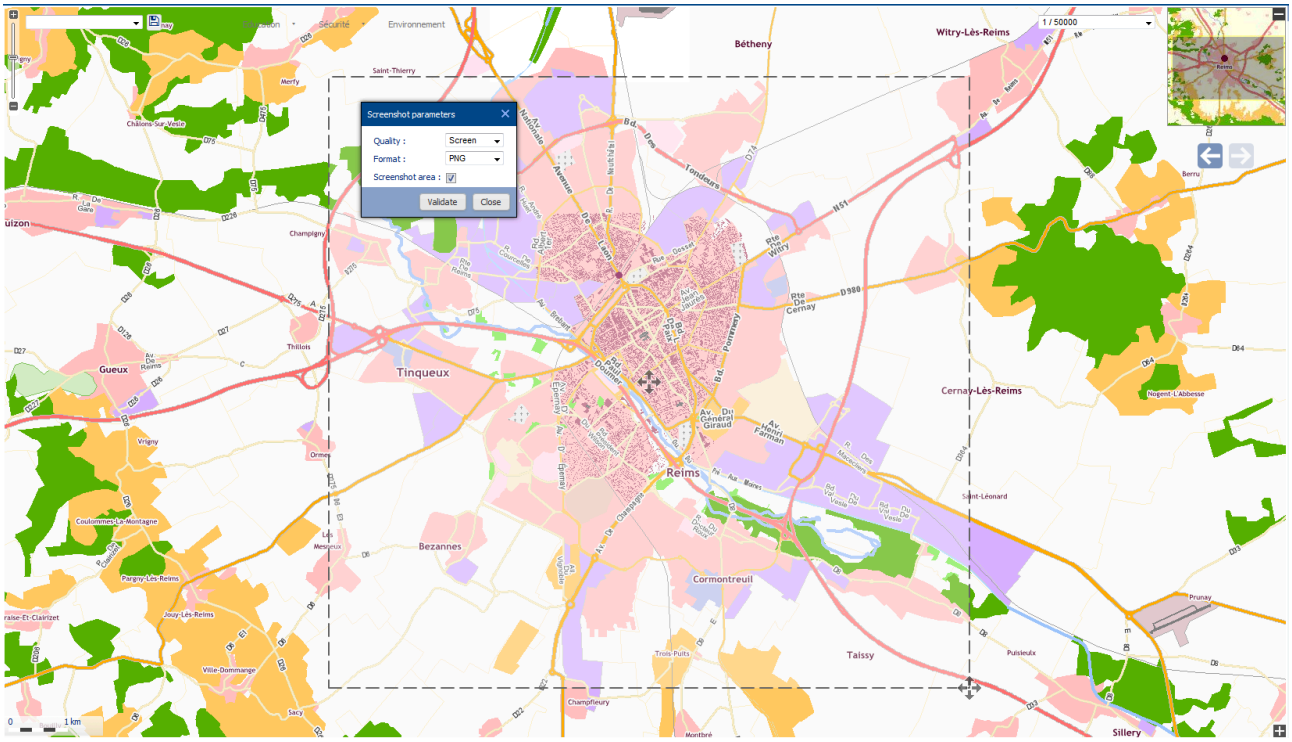
The Screenshot widget serves to perform an export of the map in the form of an image. The latter will be saved in a directory that the user will define. By default, the screenshot will take the whole of the map’s footprint and save it in .png format.

Properties:

When the mapping portal is published and the “Screenshot” widget is activated, a new window proposes the following parameter settings to the user:

- Choice of quality : choice of the image quality (screen, standard, improved).
- Choice of format : choice of an image format (BMP, GIF, JPG, PNG)
- Print area : manual definition of the capture zone. If the latter has been enabled, the user sees a fictitious imprint of the image size, and can adjust the imprint of the screen shot that is saved. Not available in responsive mode.

List of parameter settings available during activation of the Screenshot widget.

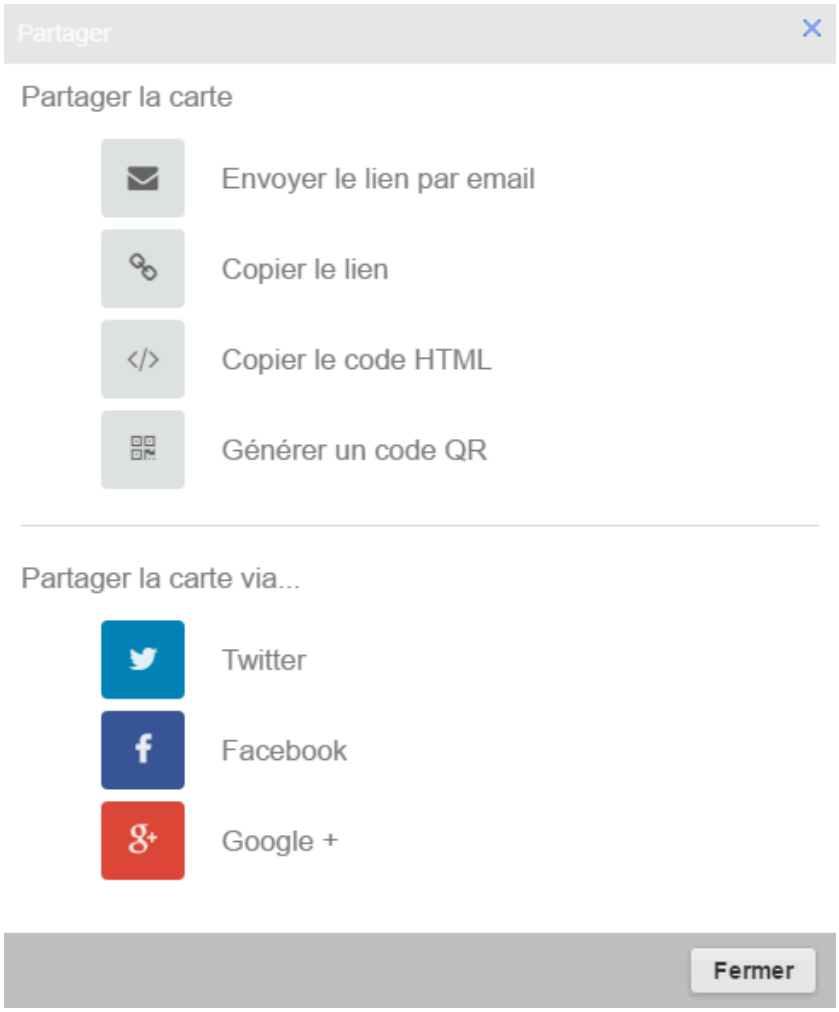


Share

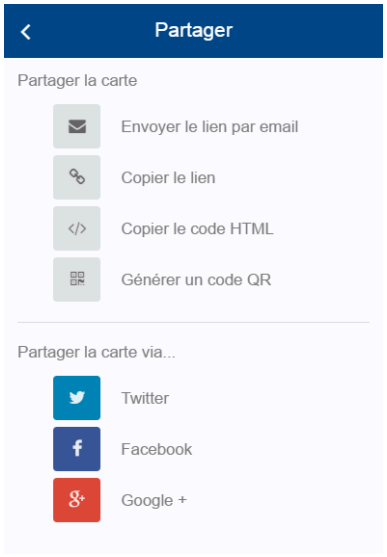
Available in mobile/responsive mode.

This button offers the user an option to obtain a link on the map in its current configuration, that is, while conserving the current position as well as the layers displayed, and taking into account their transparency.

Share Widget



Mobile share Widget



From version 5.2 of Geoconcept Web onwards, the links generated are shortcuts and take the following structure:

```
http://[adresse du serveur]/[nom du projet]/easy/public/map2?token=0b737eb0-a14e-43a1-964b-c8912acb34e3.
```

The token is stored in the database in the *gw_egw_map_context* table with its associated description in JSON format.

Links generated with previous versions remain functional.

Properties:

To activate on a case by case basis:

- Send the link by email
- Copy the link
- Copy the HTML code : specifies the *iframe* code enabling insertion of the map in its own web site.
- Generate a QR code : to share the link with mobile terminals using apps that know how to read the QR codes. The link is "hidden" in the drawing of the QR code.
- Twitter : to share on the Twitter social network.
- Facebook : to share on the Facebook social network.
- Google + : to share on the Google + social network.
- Reduction of the URL with Bit.ly : allows you to obtain statistics on the number of clicks. To use this option, it will be necessary to create a bit.ly account and to fill the field called Access token with the ID supplied.

Printing

The Print button opens a image version of the map in a new browser tab (in JPG format). It is then possible to add a title to the defined text zone.

In the case where the user has opened an infobox on an object just before clicking on the Print button, this infobox is retrieved by the print tool and positioned to the right of the map for printing. The legend is also retrieved and displayed in the printout.

The Print button can be used to print the page via a printer, or to create a PDF via a PDF printer.

PDF printing

Available in mobile/responsive mode.

This tool allows a user to create a PDF file of the map.

Configuration of the widget

When printing a PDF, certain settings are required. By default the Geoconcept Web installer creates the settings and sub-directories needed in “C:\Geoconcept Web” designated as “<DATA_HOME>” below. These filepaths can be changed by modifying the following values in the Administration ‣ Settings ‣ Widgets ‣ PDF section.

- The page layout templates available to the user are page layouts sourced by Geoconcept. They need to be saved in .xml format and placed in the location indicated in Templates path directory, by default: “<DATA_HOME>\data\pdftemplates”. This contains the .xml files. The .xsl files are generated automatically by the application.
- The advanced setting htc.export.directory: indicates the full filepath to the directory in which the PDFs generated will be temporarily stored, default: “<DATA_HOME>\temp\export”. To prevent overload on the server disk, this folder is automatically emptied every hour.

The frame sets delimiters for the print area. When you click on the frame, it can be resized or moved using the mouse.

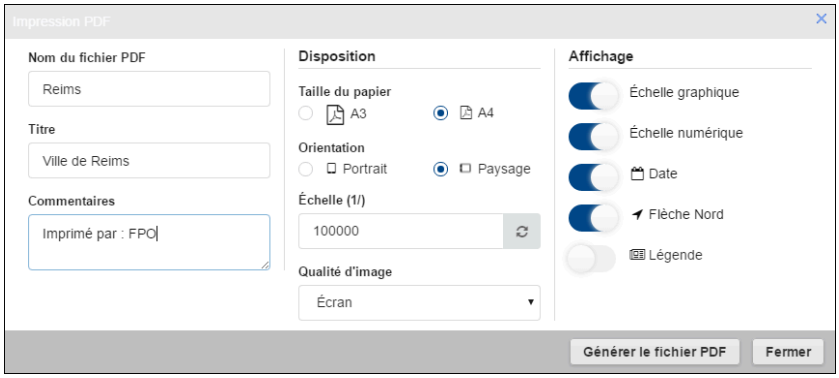
Properties:

- copyright : this is the copyright message that will be printed on the PDF generated; it is different from the one displayed in the mapping portal and saved in the Wizard,
- logo 1 : by default, this will be the logo configured in the Wizard. The administrator can choose (Administration/Rights/Companies) another logo that will be printed on the PDF generated without having to choose a logo here.
- logo 2 : a second logo can also be added to the PDF, by choosing the images required in the drop-down list,
- Display legends : authorises users to display a legend in their page layout,
- Default paper size : the chosen format, A4 or A3, is enabled by default,
- Default orientation : with the orientation chosen, Portait or Landscape, is enabled by default,
- Add default numeric scale : the numeric scale is activated by default, or not,
- Add a graphic scale by default : the graphic scale is activated by default or not,
- Add a North arrow by default : the North arrow is activated by default, or not,
- Add the date by default : the date is activated by default or not,
- Default image quality : the chosen image quality, screen, standard or improved, is activated by default,
- Find data item : serves to retrieve information on an object located at the centre of the zone to print (for example, town name, parcel number etc…). To do this, a class/subclass/field of the Geoconcept map being used must be defined. To enhance the presentation, it is possible to add set text (for example, «Parcel number: 234», with set text «Parcel number:» and «234» as the result of find data item .

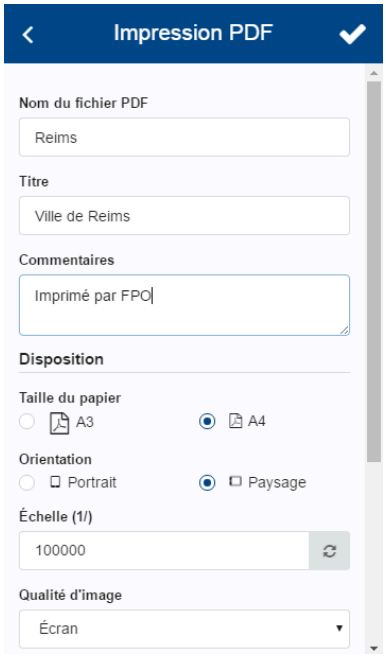
When creating the PDF file, the user can choose the following options:

- Name of the PDF file: optional. If this field remains empty, a default name will be attributed,
- Title: this serves to assign a title to the document,
- Comment: a comment line can be added to the PDF, Disposition Section
- Paper size: allows you to choose the print format as A4 or A3, depending on the templates suggested by the administrator.
- Orientation: allows you to choose the orientation of the paper as Portait or Landscape, as a function of the templates suggested by the administrator,
- Scale: this serves to define the print scale, by typing in the value in the text field. The Enter button at the keyboard, or the Refresh button validates the scale entered,
- Image quality: this allows the user to choose the image quality generated in the PDF (low: 100 dpi, standard: 200 dpi, enhanced: 300 dpi). Display Section
- Graphic scale: allows you to add a graphic scale
- Numeric scale: allows you to add a numeric scale to the PDF,
- Date: this option adds today's date to the document,
- North arrow: displays a North arrow in the PDF
- Legend: this serves to add legends to the PDF. When this box is checked, the user needs to then select which legends need to be printed (selecting from all the legends for the activated layers),

Options when generating a PDF file



Options when generating a PDF file with the mobile version



In the Geoconcept page layout, the elements must have the following names, in order to be taken into account when the PDF is generated:

- map: map
- title: title
- main logo: logo1
- secondary logo: logo2
- North arrow: northArrow
- copyright: copyright
- scale in text format: scale
- date in text format: date
- commentary: comment
- legend: legend
- find data item: reverseData
- set text: the name property should start with text (eg <page-layout-block kind="text" name="text 101" …/>), and the value property should contain the text to display in the page layout (eg: <block-property kind="string" value="Parcel number:" …/>).

These components are not necessarily present in the page layouts supplied with Geoconcept Web, so they should be added if necessary by editing the page layout XML file.

If one of the elements Format, Orientation and with or without Legend is not present in the page layout templates, it will not be possible for the user to activate it. For example, if there is no page layout template available in A3 format, then the A3 button cannot be activated.

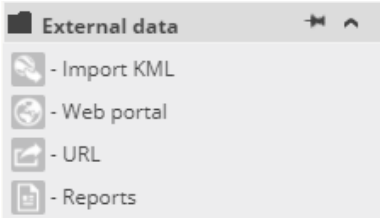
Quick PDF

Available in mobile/responsive mode.

This tool serves to rapidly create a PDF file of the map. The PDF file just contains the map and the scale. Generating using this widget is faster than using the PDF widget.

External data Widgets

Widgets in the External data category



KML importation

It is possible to import external data in .kml format into the Geoconcept Web portal. To dislay these data, click on the widget and then on the Browse button to select the file to import. Then click on Add KML Layer to validate the import. The layers manager (simple or advanced) indicates a new line with the name “KML”.

The addition of KM data is temporary: no saving of data imported will be performed. If the user wants to refresh the internet page, the KML data will have disappeared during reloading of the mapping portal. It will then be necessary to restart importation if the data must be displayed again.

Web portal

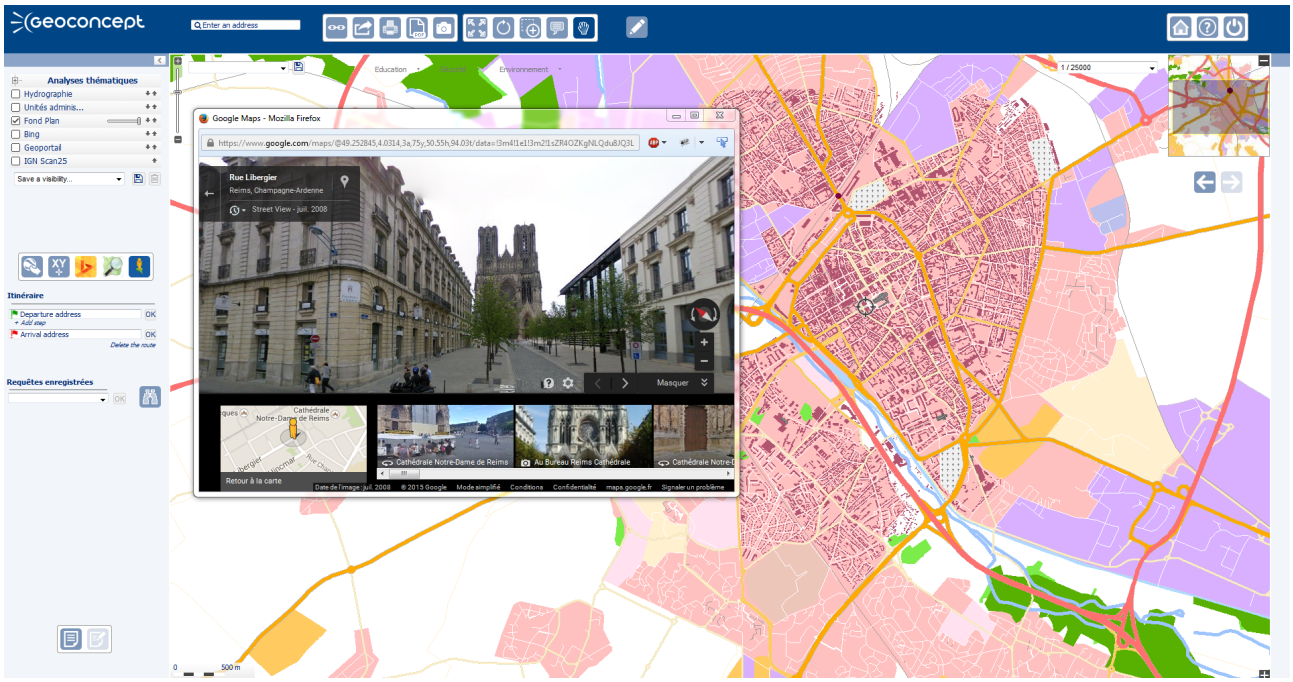
Available in mobile/responsive mode.

The Web Portal widget enriches the project by giving it one (or several) access points to other platforms hosting geographic information. To activate this functionality, the user must first define the external datasource in the Composer that they wish to use.

When the portal is published, the widget functions in two stages:

- A first left-click on the widget to activate the functionality,
- A second mouse-click on the map opens the datasource defined previously in a new window.

Example of the utilisation of Google Street View



Properties:

- Portal : The sources of available data are extracts from the following portals: Geoportal, OpenStreetMap, Google, Here, Yahoo and Bing.

URL

Available in mobile/responsive mode.

This widget opens a URL in a new browser tab. It is used in two distinct ways:

- either a click on the widget opens the URL supplied under properties,
- or, a click on the widget allows you to activate it, and then a click on one of the objects in the Geoconcept map opens the URL supplied in a Class/Subclass/Field in the map.

Properties:

If dynamic URL is not checked:

- URL : allows you to specify the url of the site to open with a click on the widget.

If dynamic URL is checked:

the URL opens when you click on the map object as a function of the following properties:

- Visible objects : when this parameter is activated, only visible objects (in the Geoconcept map view or visibility) are clickable, and in the event that they are not (the default behaviour) all the objects can be interrogated.
- Class : specifies the Class in the map
- Subclass : specifies the Subclass in the map
- Field : specifies the Field containing the url.

Reports

Available as a function of the version of Geoconcept Web

This widget allows the user to consult files in PDF format associated to a layer of geographic data.

Publishing of reports can be accomplished:

- either from the Geoconcept GIS (via the menu option / Links / Webmaps / Publish);
- or from the Reports lateral menu in Administration.

Configuration of the widget

Publishing reports from the Geoconcept GIS requires certain settings. By default, the Geoconcept Web installer creates the settings and the sub-directories needed in “C:\Geoconcept Web” designated as “<DATA_HOME>” below. These filepaths can be changed by editing the values below in the Administration ‣ Settings ‣ Widget ‣ Reports section.

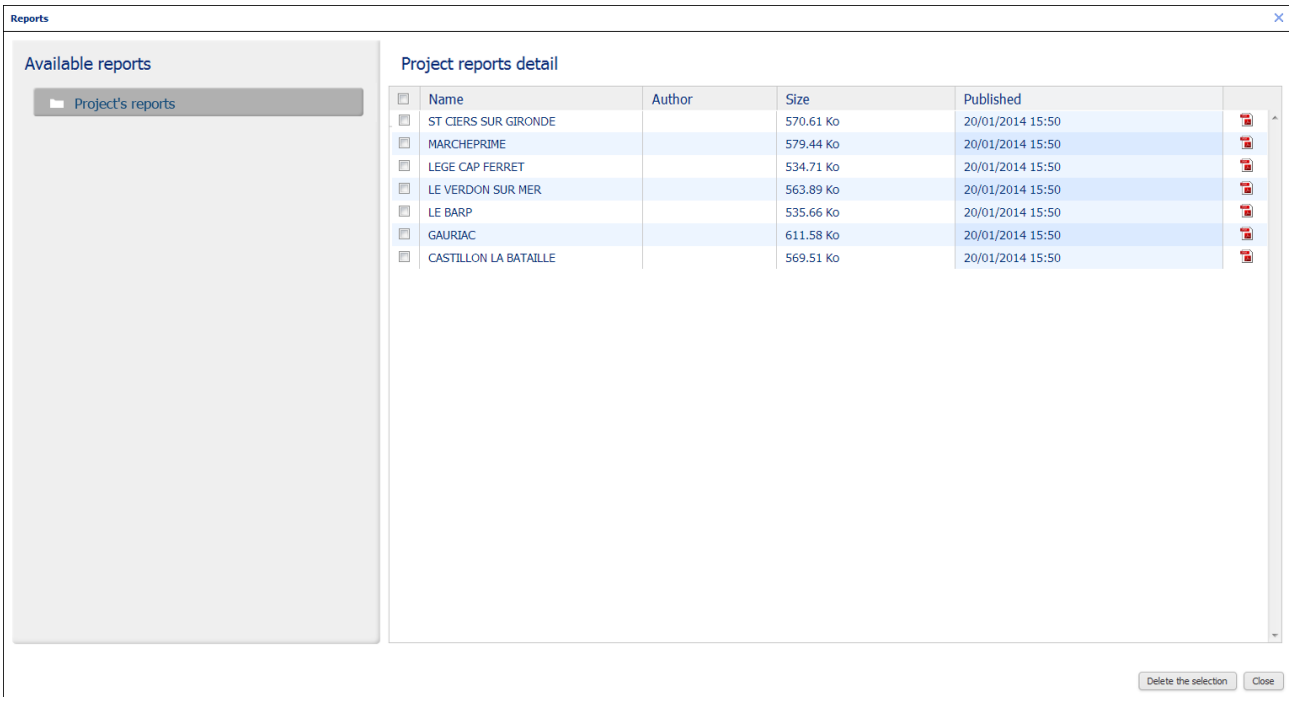
- Upload path directory: indicates the full filepath to the directory where the reports transit before being published, default: “<DATA_HOME>\temp\gcws\data”,
- Reports path directory: indicates the full filepath to the directory in which reports on the server are stored, default: “<DATA_HOME>\data\gcws\reports”,

Having published the reports in Geoconcept, where the user will have taken care to indicate which project the PDF reports are to be associated with, the documents can be consulted in one of two ways:

- by activating the Report Widget

Once the cartographic portal has been deployed, the user can click on the Report icon. A new window opens and shows the list of pdf documents associated to the cartographic project consulted.

Opening the window listing all the reports associated to a project



The user can sort the documents by clicking on the headers of each column so as to apply a sort in increasing or decreasing alphabetical order. Clicking on one of the red PDF icons (the right-hand column in the table) will start the process of downloading the associated document.

Depending on the configuration of your internet browser, the PDF file downloaded recently will open automatically. If it doesn't doe this, it will be necessary to go into the Downloading directory to open the file manually.

Important note: The name of the report must be unique. You can, of course, customise it to achieve a more readable display, by adding an underscore character "_" after the identifying part of the name, followed by the relevant string. For example, if the file is called "81005-001_Hospital.pdf" it is displayed in the report table as "Hospital".

Rights:

- reports: if the user has the right to delete, they can select one or several PDF documents and delete them from the project currently under consultation.

- by activating the infobox Widget

Another way of consulting a report is to interrogate a geographic object via the Infobox function. To gain access to the PDF document, the following three conditions must be fulfilled: verify as follows

1. Has a report been associated to an object on the Geoconcept map?

2. Has the reports field created in the Class / Subclass of the data layer been activated in the Geoconcept mini-information form?

3. Has the report title been defined in the reports field?

> Important note: The name of the report must be unique.

If both these conditions have been fulfilled, the user must ensure that the data layer where the reports are associated is visible (checked) in the their project.

Clicking on the Infobox widget, the user can, by left-clicking on the geographic object, open the infobox form.

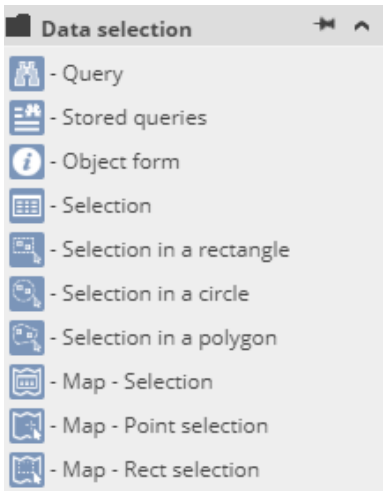
The PDF icon, when clicked on, allows the user to download the report associated to this object.

Example of a mini-form proposing a PDF document for consultation

> Creating an Alias for the *'Reports*' field
>
> In the Composer, the user can modify the name of the field indicating the presence of a report when this is displayed in the infobox or popup (tooltip) of a geographic object. For this to happen, the user must select the Tooltip widget and then click on Widget properties and change the name of the report field with the alias of choice.

Data selection widget

Widgets in the Data selection category



Query and Saved queries

The Saved queries Widget is available in mobile/responsive mode.

Before you can exploit this functionality, one or several vector layers must have been created from Administration / Layers / Vector layers.

Take care about the number of selected fields to display in the query result. The higher the number of fields to display, the slower the query will be to process and display.

Query

The Query widget allows you to query objects contained in the different layers that have been defined previously. The queries are then performed *'on the fly*'.

The user clicks on the widget and a window proposes a choice of:

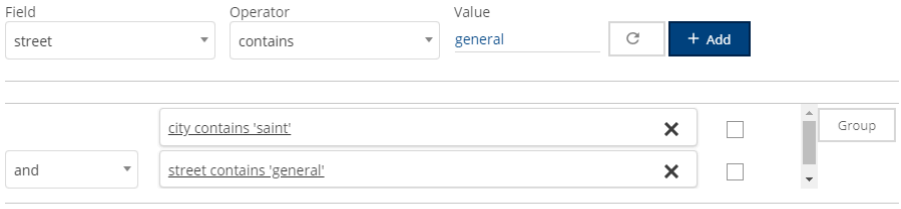
- the data layer to consult,
- the style to associate to the result.

The next step is to construct the query. The query is built according to attributed and/or spatial criteria. The first tab allows you to define the field, the operator, the value. The second tab allows you to define the geographic parameters (Reference object, spatial operator…).

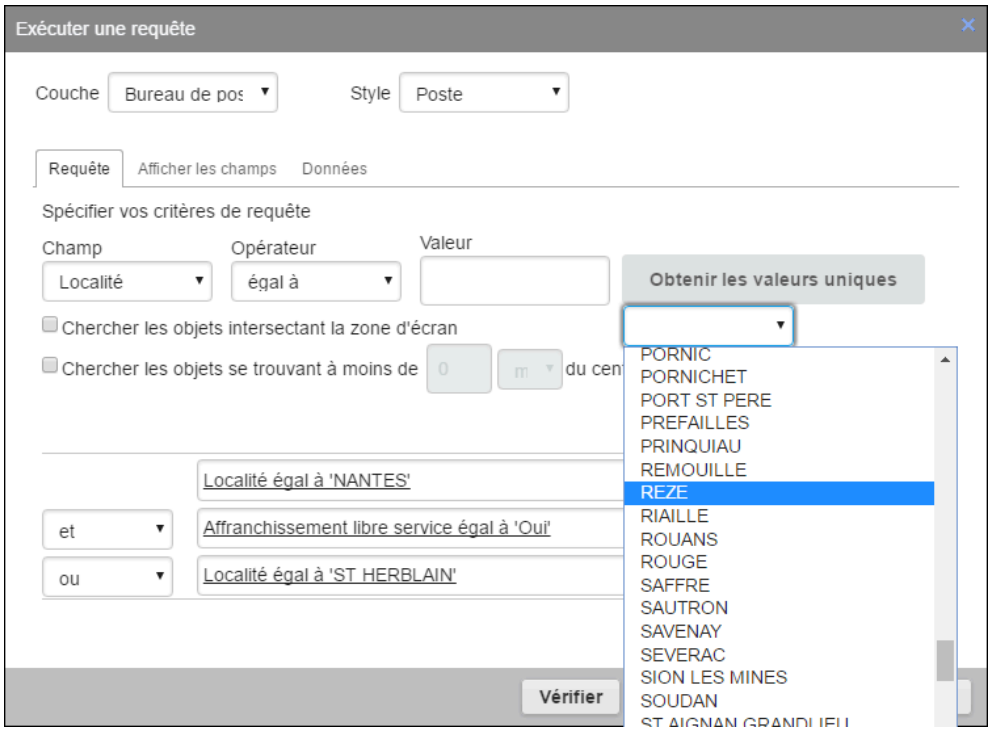
The Attribute query tab suggests the choice of a field, an operator, and a value. The Obtain unique values button helps the user by suggesting the list of unique values for the query field.

Once the parameters have been chosen, the + Add button validates the choice. Queries can also be combined.

Spatial query



Example of the query construction window



Searches may be performed on fixed intervals. For example:

selection of objects with a field value of today

- Selection of the field (this must be a date type field)
- operator = equals
- interval = day
- value = 0 (0 = today, -1 = yesterday, -2 = day before yesterday, 1 = tomorrow, …)

selection of all objects for which the field value is less than one month

- Selection of the field (this must be a date type field)
- operator = before

- interval = month
- value = -1 (0 = current month, -1 = last month, -2 = the month before last month, 1 = next month, …)

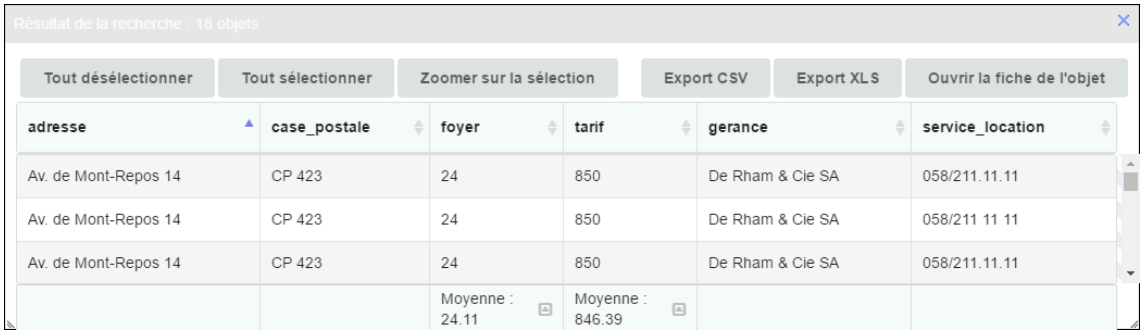
…

The Spatial query tab serves to create a "topological" query, i.e. one that is based on one or more existing objects. The objects to search for can be included in the reference object, intersecting the reference object or objects, or located at a particular distance from the centre of the screen.

Caution, a query created via the Query widget will not be saved. To do this you will need to go into the Queries lateral menu in the Designer.

Each query executed generates a result table that contains attributed fields that will have been selected previously. It is possible to add, for the numeric fields, a calculation line (count, minimum, maximum, median, average, sum). This table can be exported in .csv or .xls format.

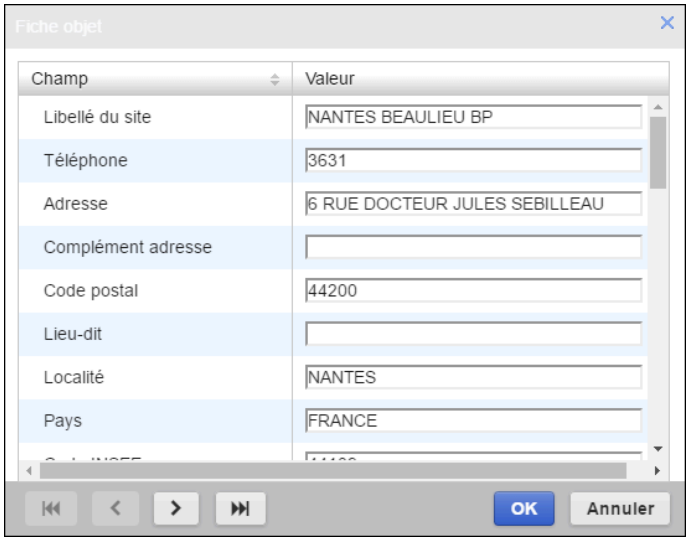
Table displaying the results of a query



Finally, the user can modify the values of one or several objects sourced by a database. To edit the information, you need to click on one of the record lines in the table of results that you want to modify. When the line has been selected, it is highlighted in green. Clicking on the open the object form , a new window opens containing the “business specific fields” of the database, and enables editing of the information attached to the selected geographic object.

Once the modifications have been made, simply click on the OK button to validate the changes that will be applied directly in the dedicated table in the database, or click on the Cancel button to exit from the POI editing session without saving the modifications made.

Editing the data of an object from its form



Saved queries

This widget allows users to use queries pre-saved by the administrator from the lateral Queries menu in the backoffice. The user chooses in the list the query to execute, and obtains a table of results as with the Query widget described earlier.

(fr) Dans les propriétés du widget, il est possible de gérer l'ordre d'affichage des requêtes en les déplaçant par cliquer-glisser.

Object form

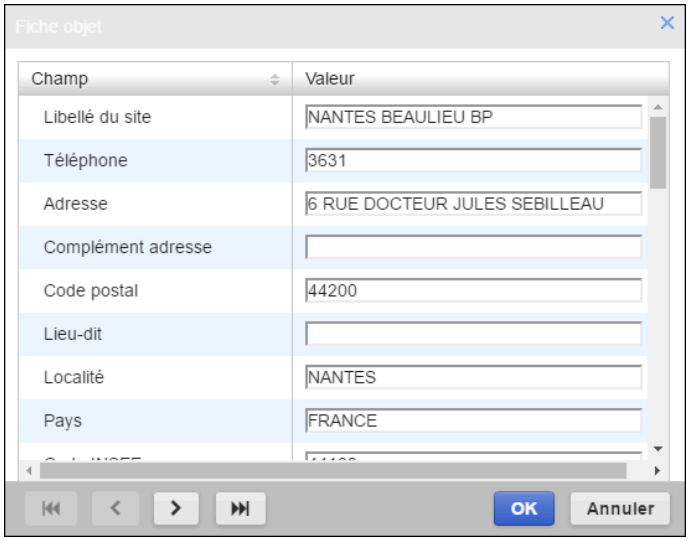
Available in mobile/responsive mode.

Before you can exploit this functionality, one or several vector layers must have been created from Administration / Layers / Vector layers.

The operation of this widget is identical to the open the object form button described in the query widget. This allows you to open an editable form of a vector object when you click on it in the map. Only vector layers configured for this widget by the administrator are editable. It is possible to use several widgets of this type in a single portal, linking them to different layers.

The chapter called Administration / Layers / Vector layers describes how to configure the form (fields to display, to protect, sequencing, input mandatory or not, …).

Editing the data of an object from its form



Properties:

- Layers : allows you to choose from the available vector layers, one or several, for which editing is authorised.

Selection

This permits display of the current list of selected objects, either using a query, or using manual selection. The list can be closed and reopened so long as the objects are selected on the screen.

Selection by rectangle, circle or polygon

These widgets offer a selection functionality for point type vector objects by plotting a shape superimposed on the map. All objects present in the selected zone are then displayed in the map, along with the associated table.

(fr) cliquez un par un sur les autres fichiers à sélectionner. Vous souhaitez sélectionner tous les fichiers d'un dossier : Enfin, pour sélectionner tous les fichiers d'un dossier, utilisez simplement le raccourci clavier Ctrl + A.

There are two possible operating modes for this functionality:

- a class of objects is already displayed in the cartographic portal: objects can only be selected in the Class already displayed using the selection tool
- no object Class is displayed in the cartographic portal: using a selection tool makes it possible to select objects from all the available Classes

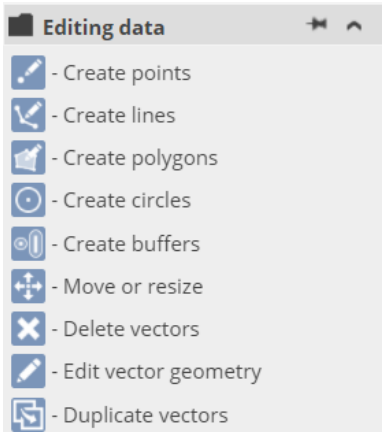
Category menu

Avaiilable only if the Manage objects option is enabled (functionality available in versions up to version 7.5).

This widget makes available a functionality for displaying vector objects. The categories of vector objects are displayed in the form of menus with a drop-down list that catalogues the classified types for each of them. A click on a type of vector object allows display in the map of the said objects, superposed on the map. This feature also allows all vector objects to be displayed in a table when they are displayed in the map interface.

Data edit widget

Widgets in the Data edit category



These widgets allow the user to dispose of access rights, and to create, modify, or delete vector objects directly from the mapping portal.

Create points, Create lines, and Create polygons

For each of the creation widgets, the administrator determines a single layer. It is therefore necessary to create as many creation widgets as there are layers to edit. After creation of the object, the object form opens so the user can fill in values for the fields, and it is also possible to use an external form by calling it with a URL.

To be edited, a layer must be visible in the portal. The user must be able, via the advanced layer manager widget, to display the layer to edit.

Vector object selection tools or queries allow display of the *Search result* search result table. In this table, the Open form button can be used to edit object attributes directly.

To restrict editing rights in the *Search result* table, you will need to define editing rights for each vector layer, using the `Groups authorised to edit this layer` parameter in the Administration ‣ Layers ‣ Vector layers ‣ Single layer information menu

Properties:

- Choose the layer : defines the vector layer to edit.
- Display the form : permits display or not of the object form page once creation has been completed.
- URL : if this field is filled, a form external to the application displays for the input of data.

Creating circles

This widget allows the user to create a vector object in the shape of a circle. An areal vector layer must be already present. The administrator defines a single vector layer attached to the widget.

Following activation of the widget, a click in the map allows you to define the centre of the circle. If the Draw radius manually option is checked, then a window prompts the user to enter the value of the radius, and if not, a second click allows you to define the circle radius with or without display of the radius (the option below).

Properties:

- Display the radius of the drawing : when the circle is created, the radius will appear on the screen
- Enter the radius manually : allows you to enter the circle's radius manually
- Choose the layer : allows you to choose from the polygon vector layers available, a layer for which creation rights are granted.
- Display the form : permits display or not of the object form page once creation has been completed.
- URL : if this field is filled, a form external to the application displays for the input of data.

Creating buffer zones

This widget allows the user to create buffer zones around selected vector objects (points, lines, polygons). A polygon vector layer must be available in the project at the outset. The administrator defines a single vector layer attached to the widget.

The first step consists of selecting one or several vector objects. A click on the Create buffer zones widget causes a window to open in which the value of the buffer zone can be entered.

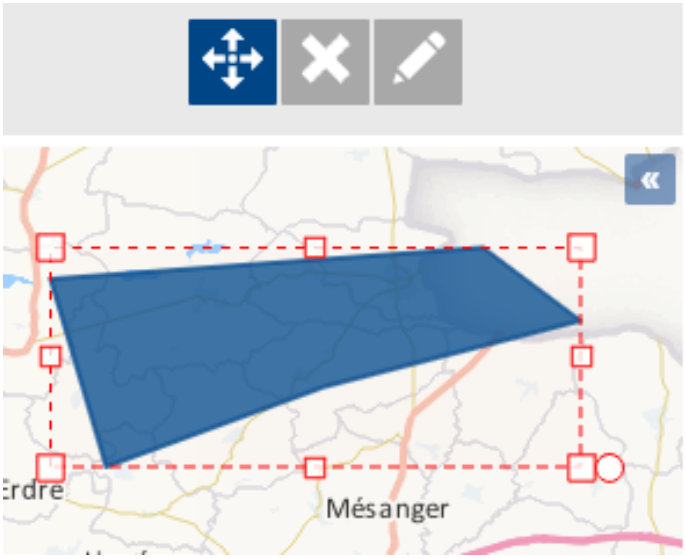
(fr) La couleur de la zone tampon peut être définie dans les propriétés du widget.

Move, re-size or rotate a vector.

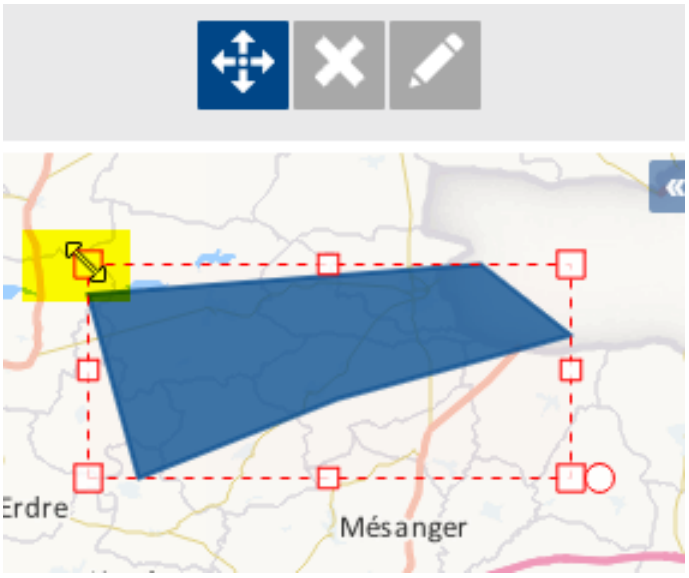
This tool allows you to move a line object, polygon or point, to re-size a polygon or line object, or to rotate a line or polygon object. The objects concerned belong to vector layers defined in the widget properties.

Activating this widget has the effect of transforming the cursor into a hand. Clicking on an object, square handles appear around the object: the cursor transforms into a double-arrow which can be used to re-size the object with a click-and-drag mouse action. Rotation is performed by clicking on the round handle situated at the bottom right of the object.

handles used to re-size or rotate an object



re-size an object



A simple click-drag-drop action moves the object.

Properties:

- Layers : allows you to choose from the available vector layers, one or several, for which editing is authorised.

Deleting vector objects

Once the widget has been activated, a single click on an object allows the user to request deletion of the object. A confirmation message is suggested if this option has been selected under the widget properties.

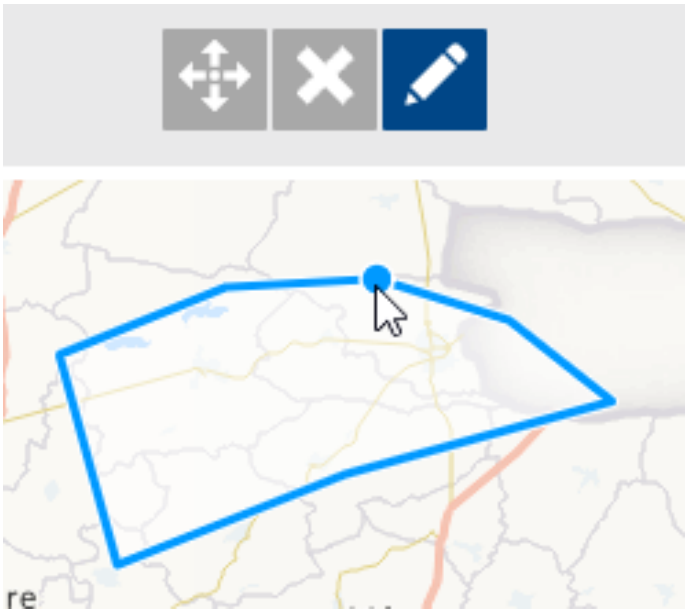
Properties:

- Layers : allows you to choose from the available vector layers, one or several, for which editing is authorised.
- Display confirmation message when deleting an object : option to check if you want the confirmation message to display before deletion.

(fr) Modifier la géométrie

This tool allows you to edit polygon or line object geometry. For a point object, this is equivalent to moving the object. Once the widget has been activated, you need to click on the object and move along the line or polygon outline in order to either create an intermediate construction point, or move an existing point, or create a new construction point, holding down the Alt key while you click on the object.

Editing an object



Properties:

- Layers : allows you to choose from the available vector layers, one or several, for which editing is authorised.

(fr) Dupliquer les vecteurs

(fr) Cet outil permet de dupliquer le ou les objets sélectionnés.

Properties:

- (fr) Afficher une confirmation lors de la duplication de vecteur : option à cocher pour afficher un message de confirmation.
- (fr) Afficher la liste de sélection après avoir terminé : option à cocher afin d'afficher, à l'issu de l'action, la liste de sélection avec les objets dupliqués.

Analysis widgets

Widgets of the Analysis category

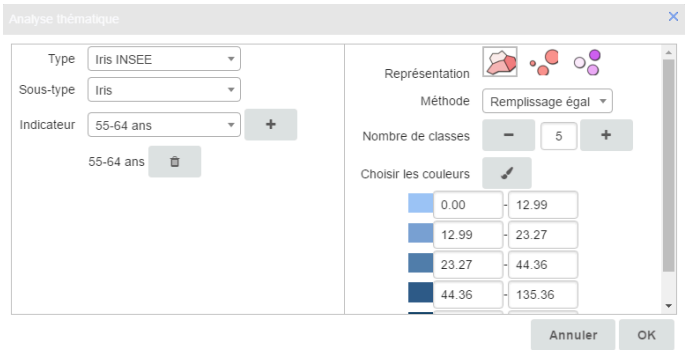
Thematic

To use thematics, it will be necessary to:

- create a *'GCIS Virtual Layers*' Class in the map (the *.gcm, *.gcr files). The Subclass name and type are unimportant.
- create a tab named EMPTY in which only the "GCIS Virtual Layers" Class/Subclass is visible;
- create a tiled layer (of any name) in the administration Layers section / Tiled layers based on the *'EMPTY*' tab in the map;
- choose a numeric type field (integer or real) in the dialogue box.

The Thematics widget opens a dialogue box divided up into two sections.

Thematics Editor



The first section on the left allows choice of the information layer to be treated, that is:

- the Class and Subclass of objects containing the information to treat in thematic cartography with the help of two drop-down lists;
- the indicator allows you to choose in the list of fields carried by the chosen Subclass, the indicator to process. Click on the + button to validate the choice.

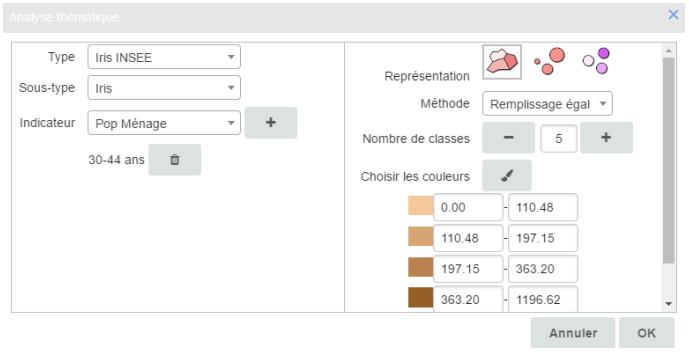
Click on the

button to invalidate the choice of field selected previously.

The right-hand section shows the different parameters for construction of a thematic analysis. Three display modes can be used to map the qualification data.

Analysis by colour gradient

Analysis by colour gradient on polygon objects



Clicking on the

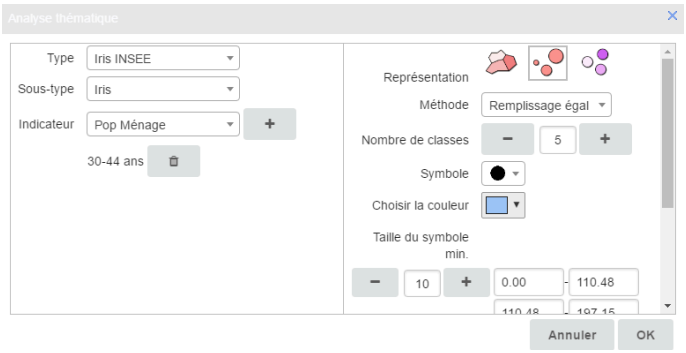
button, the dialogue box adjusts the parameters to define. The statistical method suggests choosing between two kinds of range analysis, one breaking down the statistical series into equal fill ranges, and the other, equal width ranges. The number of ranges must then be entered using the + or - buttons, or directly in the text entry zone. A choice of colours, using the brush provided, enables selection of the

colour gradient to apply. The colour gradients possible, as suggested in the colour palette, are adjusted as a function of the number of ranges chosen.

A summary table shows one line per range associated to the colour assigned to the range. Each of the bounds can be edited to adjust the values as required.

Analysis with proportionally sized symbols

Analysis using proportionally sized symbols

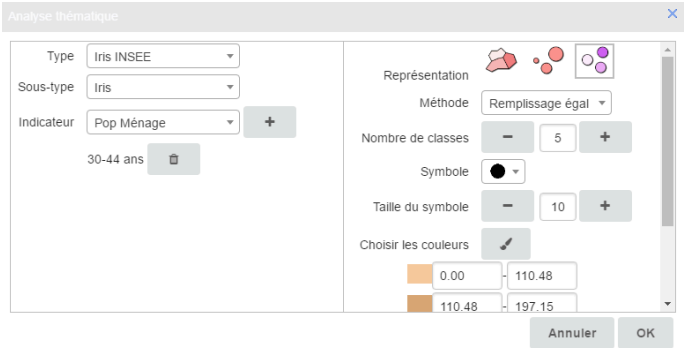


When you click on the

button, the dialogue adjusts the parameters to define. The statistical method suggests choosing between two kinds of range analysis, one breaking down the statistical series into equal fill ranges, and the other, equal width ranges. The number of ranges must then be entered using the + or - buttons, or directly in the text entry zone. The symbol shape is chosen in the list of simple symbols proposed. The colour palette is used to select a colour for the chosen symbol. The range bounds are editable with a view to adjusting the values. Finally you will need to assign the size of the smallest symbol, and so the one corresponding to the first range, before assigning the size of the largest symbol, or that corresponding to the last range. The + and - signs scroll the size values for the purpose of selection. They can be edited manually.

Analysis with symbols of the same size, and with a colour gradient

Analysis using coloured symbols



When you click on the

button, the dialogue adjusts the parameters to be defined. The statistical method suggests two ways of breaking down the statistical series into ranges: there is a choice between equal fill or equal width ranges. The number of ranges must then be defined using the + and - buttons, or directly in the editable zone. The symbol shape is chosen in the list of simple symbols proposed as being available. The size of symbole chosen must be attributed using the + or - buttons or directly in the editable zone. The choice of colours allows, with the use of the paint brush, a choice of a colour gradient to apply. The colour gradients in the colour palette are adjusted as a function of the number of ranges chosen. The range delimiters or bounds can be edited so the values are modified.

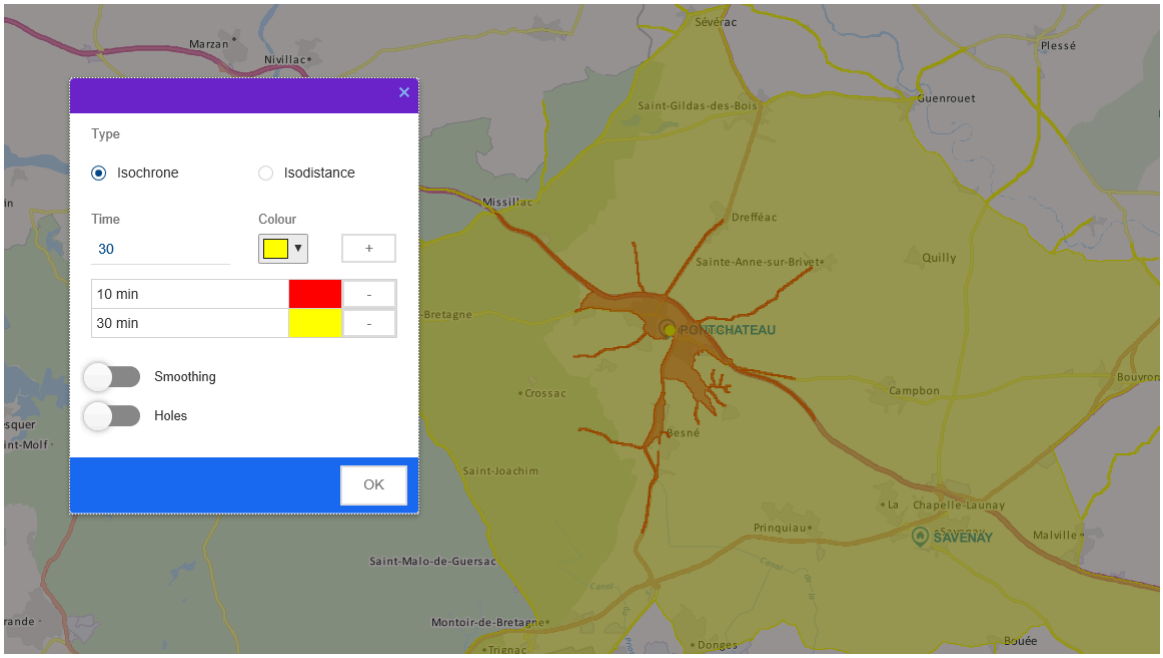
Click on the OK button and the thematic analysis is created with the legend displayed at the bottom right of the screen.

Using the project Composer, activate the Advanced layers manager in the standard widgets to view the thematic layer constructed earlier.

Isochrone

This function calculates isochrones or isodistances, either by clicking in the map, or from one or several selected vector objects.
You can also create several isochrones or isodistances (to a maximum of 5) in a single operation.

Possibility of creating several isochrones simultaneously



In the Composer, you can choose certain options that will appear subsequently during creation of the isochrone.

Properties:

- Maximum number of points for which an isochrone can be generated in a single go : this parameter is only accesible to the administrator. It allows you to reduce the number of isochrones created at the same time.
- Maximum authorised distance for an isodistance (in Km) : allows you to indicate a value over and above which the isodistance will not be created.
- Maximum authorised duration for an isochrone (in minutes) : allows you to indicate a value over and above which the isochrone will not be created.
- Confirmation while deleting an isochrone : allows to validate the deletion of an isochron.
- Smoothing option to make available for the user : if this option is checked, the user will be able, in the isochrone creation window, to choose whether the isochrone or isodistance must be smoothed or not.
- Holes option to be made available to user : if this option is checked, the user will be able to choose, in the isochrone creation window, whether the isochrone or isodistance can be made up of holes, or not.
- Zoom automatically on the isochrones generated : this allows the user, if the property is activated, to zoom automatically on the isochrone(s) created.
- Save isochrones in the user context : serves to save the isochrones created and to find them again next time the user logs in. By default, this parameter is checked. Note that user contacts can be managed via the context menu.
- Default isochrone color : allows to choose here the default color proposed when creating an isochron.

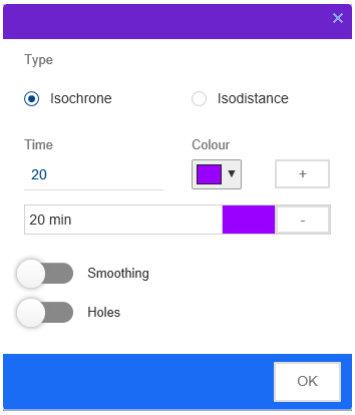
The Road networks parameter available in the 1st isochrone button allows choice of the road network on which the isochrone calculation is to be based.

For each of the 3 buttons available in this widget, you can define the Label name but also the text displayed in the Button infobox.

The first button creates isochrones or isodistances. If no object has been selected, a click on this button transforms the cursor into a cross that is then used to click on the map at the chosen location to set the start point for the isochrone.

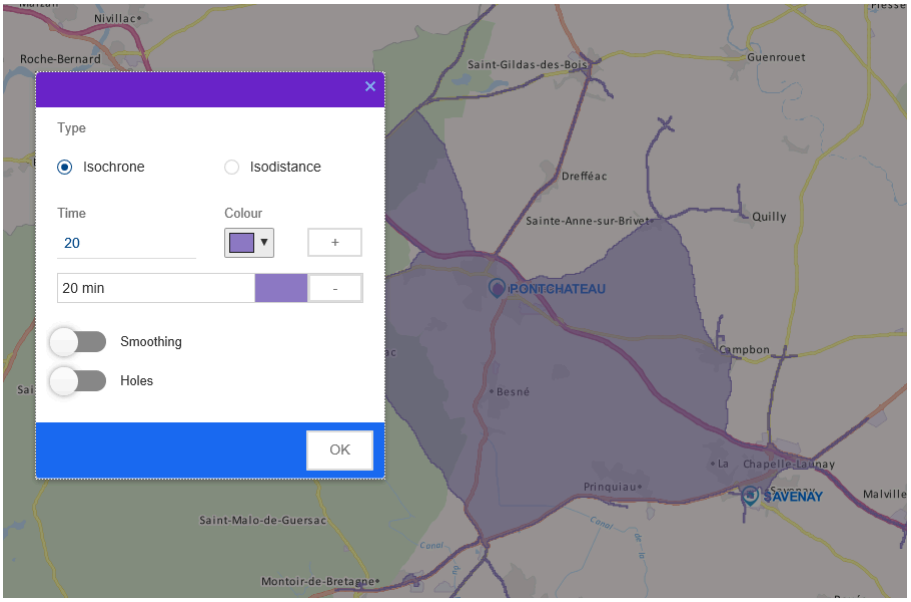
The configuration window then allows you to choose the options, and notably to choose between Isochrone and Isodistance.

Option to create an isochrone or an isodistance

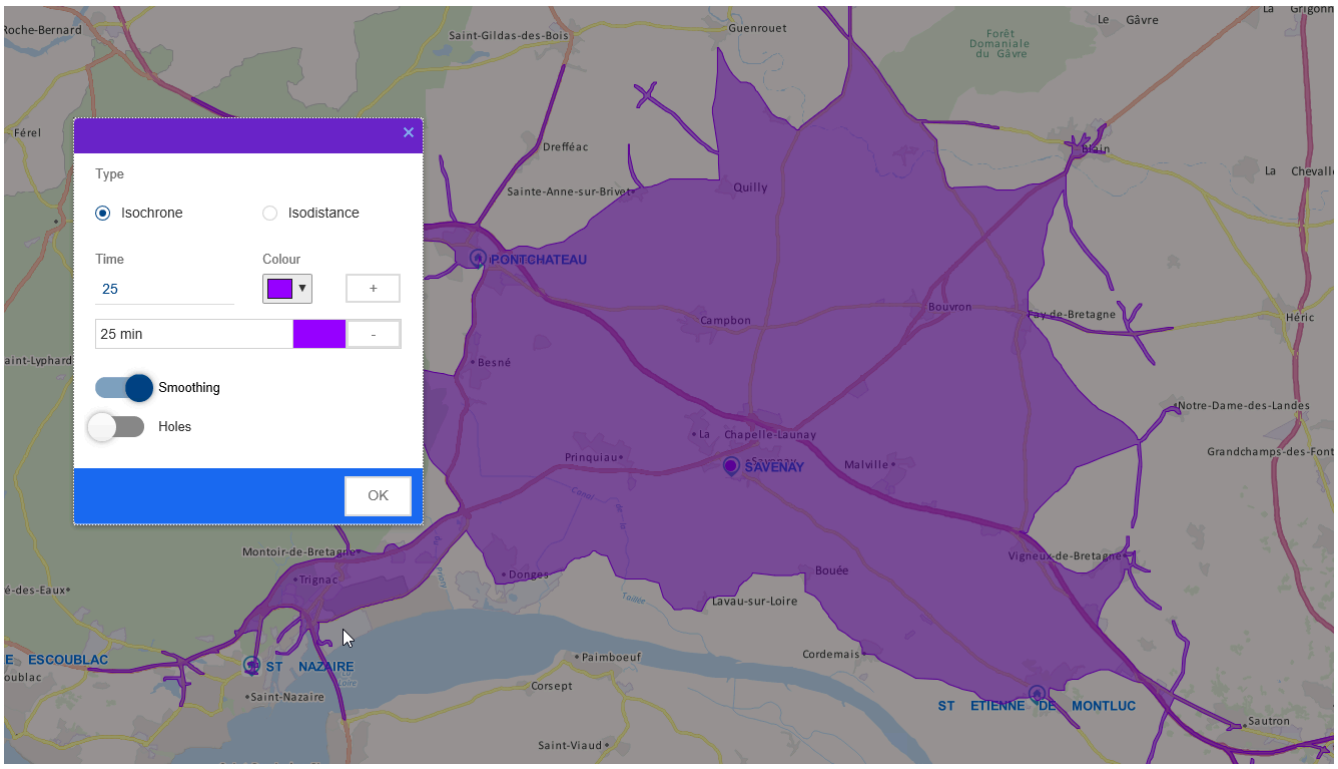


The next step is to type in a distance or a time and choose the colour of the isochrone.
The + button allows you to validate the choice.
The - button allows you to delete the choice of creation of an isochrone.

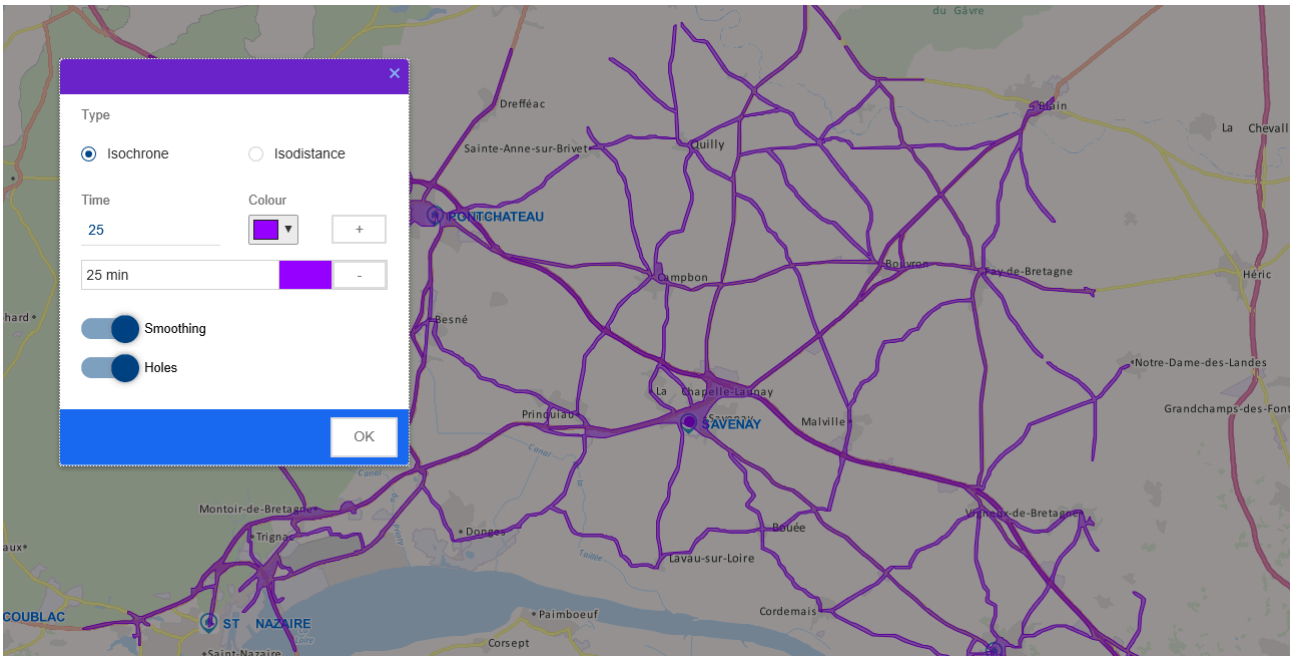
Isochrone without any option



Isochrone with Smoothing options



Isochrone with Smoothing and Holes options



The Smoothing and Holes parameters are visible if these options have been made accessible in the widget settings window via the Composer.

(fr) Pour sélectionner un isochrone, il faut utiliser le widget Sélection par rectangle (ou par cercle ou par polygone) disponible dans la famille Sélection de données.

(fr) Pour supprimer un isochrone, il faut utiliser le widget Supprimer des objets vectoriels disponible dans la famille Edition de données.

Measurement widgets

Widgets in the Measurements category

Distance

Available in mobile/responsive mode.

This widget allows you to trace a series of temporary segments on the map. The length of each of the segments, as well as the total distance covered by all the segments, display in a dialogue box.

Properties:

- Line colour : enables choice of the line outline colour.
- Text colour : enables choice of the colour of the text that indicates the distances.

Area

Available in mobile/responsive mode.

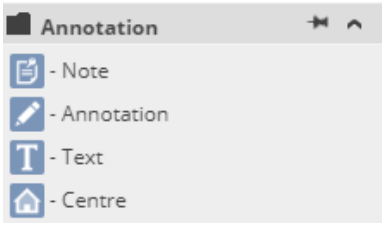
This widget allows you to measure a temporary polygon on the map. The polygon displays in a dialogue in square metres (m²) and then in square kilometers, as a function of the size of the area measured, or in ares (a) then in hectares (ha) as a function of the size of the area measured.

Properties:

- Unit : the user can also choose the units of measurement (metric or hectare) in which they want to know the result of the area calculation.
- Colour : enables choice of the drawing colour.

Annotation Widgets

Annotation type widgets



Note

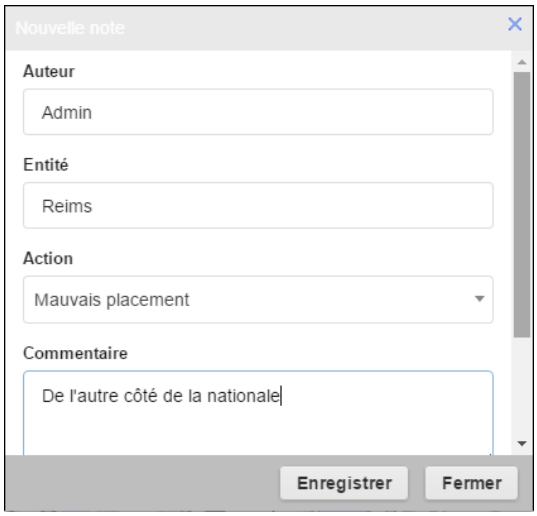
Available in mobile/responsive mode.

The utilisation of the Note Widget requires that certain configurations described in the Lateral “Note” menu

The Notes widget consists of two buttons:

- the first activates or de-activates the display of notes that have been created in the portal,
- to create a note, a second click is needed on the button. Clicking on the latter, the user can add a new *'Post-It'* OR if a note has already been created, edit the latter and modify its content. If the user creates a new note, a window will open allowing you to enter:
- the name of the author,
- in the *'Entity'* field, if this has been configured in the widget properties, an information item sourced by the Geoconcept map can be automatically uploaded if you indicate the Class /Subclass in which it can be found.
- create a description,
- append a screen shot,
- import a document such as a photo, a PDF file or files in other formats.

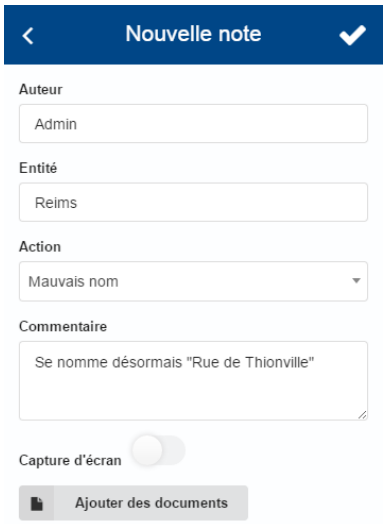
Example of the creation of a Note



Mobile

In mobile mode, the creation of a note differs a little, as in effect the activation of the Note Widget immediately authorises the input. Otherwise, for the rest of the procedures, the behaviour is identical to classical mode.

Example of the creation of a Note in mobile version



When the note has been created, it will display on the screen with the visual characteristics assigned when defined in the preceding steps. To de-activate the notes creation mode and hide all the elements appearing on the map, click again on the Notes widget.

Once a *'Post-It'* note has been created, the administrator can access the note in the Geoconcept Web Administration, in the Designer tab, and then in the Notes menus. In this dialogue you will find the tools needed to filter all existing records, and to view the content of each *'Post-It* item. Changes can also be made to content: for example, changes to status (which will automatically and simultaneously change the appearance in the portal), or choose another action; the user can also consult file attachments

uploaded by users, or see the history of processing operations on the note and track step-by-step the details of changes made to notes.

Properties:

- Entity label label of the geographic entity chosen (Town, Iris area, Zone, …).
- Creation status : default value when creating the note.
- Send an email : sending of an email on creating the note.
- Default Screen shot : Activates the default addition of the screen shot
- Find the entity : activates the search for the geographic entity.
- Class , Subclass and Fields : allows you to choose the geographic entity of the Geoconcept map to supply automatically during keyboard entry. For example, when creating a note, when the user clicks on the map, they can automatically upload the name of the town concerned by the new note. To do this, you must indicate the class, subclass, and the name of the attributed field in which the application will go and search for the information.

  In the framework of a utilization of a system field (common to all Classes in a Geoconcept map), you will have to use its name in English: Type = Class, Sous-type= Subclass, Nom = Name, ….

- display button infobox : serves to change the name of the first button when the mouse passes over it (for example: See existing notes).
- Edit button infobox : serves to change the name of the second button when passed over with the mouse (for example: Create or edit a note).

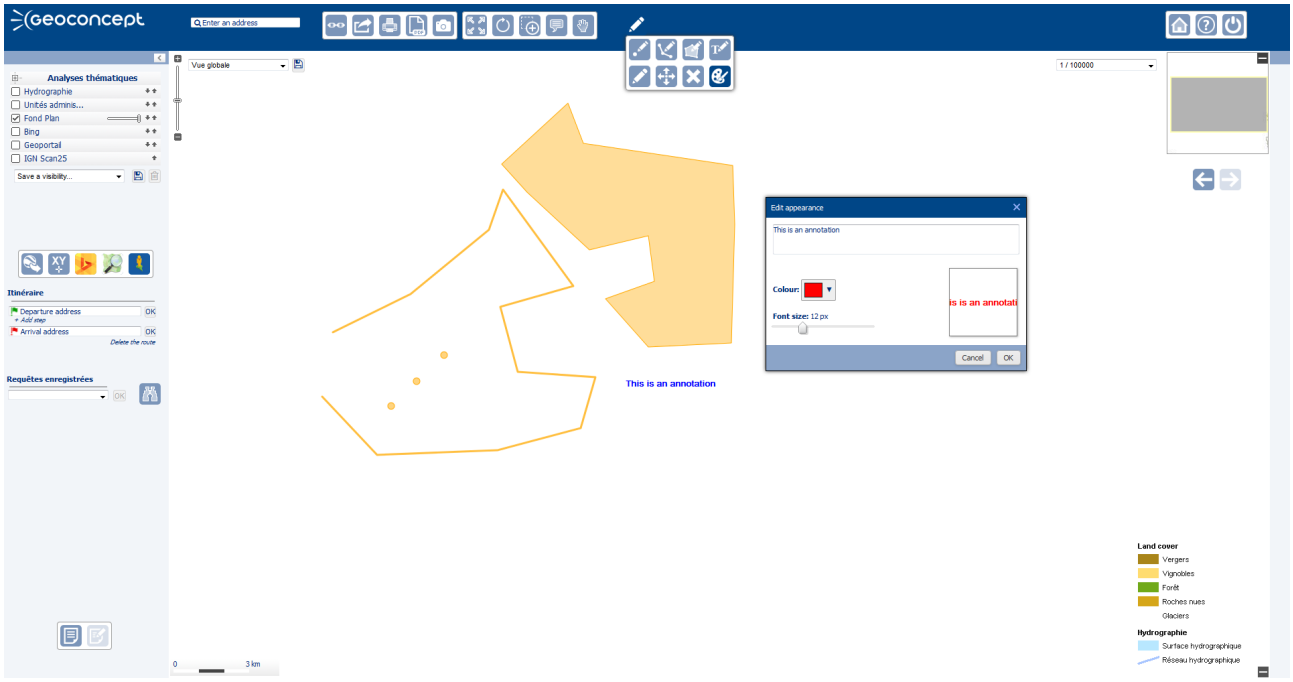
Annotation

The Annotations widget is a functionality that allows you to annotate, draw, highlight information relating to the portal. It is possible to incorporate text, points, lines, as well as polygons that can be customised by the user as required (colour, thickness, font size).

The widget consists of a single button that when activated, is used to offer a range of annotation functions:

- creation of a point,
- creation of a line,
- creation of a polygon,
- creation of a text zone,
- addition of points to a line or a polygon,
- moving an annotation created (geometric or text object),
- deletion of an annotation,
- customisation of an annotation.

Example of utilisation of the Annotations widget.



Properties:

- Number of columns : this enables you to choose the display used for the different tools as a function of the number of columns.
- Orientation : orientation of the window containing these functionalities, deployment on the right-hand or the left-hand .
- Save context : serves to save the annotations created and to find them again next time the user logs on. By default, this parameters is checked. Note that user contexts can be managed from the context menu.
- Confirm deletion of an annotation : Confirmation message when an annotation is deleted. By default, this parameter is checked.

In a portal, holding the SHIFT key pressed down, users can draw the annotations in either *'freehand*' or *'lasso*' mode.

Text

This widget allows you to insert text in a web portal and to easily edit its appearance (colour, italicm bold, underline, etc) from the "Text" tab. it also enables display of the text in a dynamic manner:

- either from defined variables;
- or by retrieveing the values from fields of an object at the centre of the screen;
- or by displaying the label for the active layer.

Defined variables

These variables need defining from the lateral menu Predefined text from the backoffice, and to be called from the "Text" tab by indicating the Name to display the associated value between two accolades as follows: {TITLE OF PREDEFINED TEXT}

Object at the centre of the screen

From the "Text" tab, click on the Parameter dependant on the map button to determine the Class, the Subclass and the Field. When the map moves, the text is updated dynamically, and displays the content of the field for the object situated at the centre of the screen. It can be used in this way, for example, as a localiser to permanently display the name of the town corresponding to the map position.

Active layer

From the “Text” tab, click on the Add active layer button. Used in tandem (simultaneously) with the single layer manager, it displays the name of the active layer.

Centre

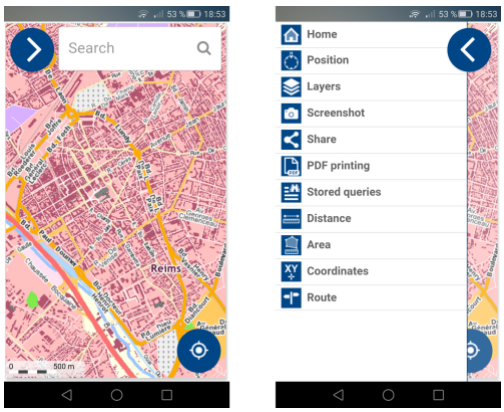
This widget serves to insert a cross to set the centre of the screen when a search around is performed, for example.

Mobile / Responsive Portal

By default, portals created with Geoconcept Web (version 5.1 onwards) feature an interface that has been adapted for use on both tablets and smartphones. Depending on the size of the terminal screen, the use of responsive mode enables switching from a "classical" display over to a display that has been optimised for small screens, and vice versa. A single portal is therefore sufficient for all types of browsing platforms: PC or mobile terminals with touch screen interfaces. Nevertheless administrators may, if they wish, disable responsive mode. Activation or de-activation is described under portal properties in the chapter devoted to the Composer.

Constraints on screen sizes require the display to be designed slightly: widgets, for the most part, are not displayed on the map but via the drop-down menu.

Example of the portal display on a smartphone



The behaviour of widgets may vary slightly between a "classical" type of portal and a "mobile" portal to enable easy operating via whatever platform is used.

> Mobile / Responsive mode is compatible on all mobile operating systems (iOS, Android, Windows Phone, …) but nonetheless, some behaviours and/or functionalities may vary depending on the restrictions imposed by operating systems.

Configuration

The configuration items specific to mobile portals are described in the chapter on the Composer, in the Mobile widgets window.

The widgets concerned by mobile mode (cf. the list that follows), have a Mobile tab in their properties that allows you:

- To edit the Label name for all widgets,
- To activate the widget in mobile/responsive mode;
- Choose a rapid access widget: displays the widget at the bottom left of the mobile portal (without having to go via the menu).
- and other parameters specific to certain widgets. Refer to the description of each widget for details of how each widget can be used.

Some individual (mobile mode) widgets

- Advanced layers manager cf. widget description
- Screen shot cf. widget description;
- Search around cf. widget description;
- Geolocalisation cf. widget description;
- Coordinates cf. widget description;
- Geocoder and Route: an address search allows you to calculate a route, taking the address found as destination. In addition, once the route has been calculated, using a browsing application already installed on the terminal (Google Maps, Waze, HERE Maps, …), it will be possible to obtain step-by-step vocal guidance (or not, as required).

Touch actions

These are standard and intuitive, and correspond to typical utilisations featured on the latest devices.

Panning the map

To move around in the map, the user swipes the screen with a single finger.

Zoom

Pinching the screen with two fingers to zoom-in, or spreading two fingers to zoom-out.

Consultation

A single touch on the screen allows you to display information related to the object (Info-box, …) open the widgets, ….

More information on this place

Touching and holding allows you to use the contextual menu.

Widgets and functionalities available with the mobile version

This section aims to describe functionalities available with the mobile version of Geoconcept Web.

Functionalities by version of Geoconcept Web

	7.0 / 7.5	2021	2022
Panes Widget	N/A	N/A	N/A
Aggregation Widget	No	No	No
Home page Widget	Yes	Yes	Yes
Reset Widget	Yes	Yes	Yes
Logout Widget	Yes	Yes	Yes
Move Widget	N/A	N/A	N/A
Zoom Widget	N/A	N/A	N/A
Tooltip Widget	Yes	Yes	Yes
Simple layers manager Widget	No	No	No
Advanced layers manager Widget	Yes	Yes	Yes
Full screen Widget	N/A	N/A	N/A
Help Widget	Yes	Yes	Yes
Contact Widget	Yes	Yes	Yes
Scale text Widget	No	No	No
Geocoder Widget	Yes	Yes	Yes
Coordinates Widget	Yes	Yes	Yes
Route Widget	Yes	Yes	Yes
Position history Widget	No	No	No
Positions Widget	Yes	Yes	Yes
Search around Widget	Yes	Yes	Yes
Geolocalisation Widget	Yes	Yes	Yes
Layer spy Widget	N/A	Yes	Yes
Screenshot Widget	Yes	Yes	Yes
Share Widget	Yes	Yes	Yes
Print Widget	No	No	No
Quick PDF Widget	N/A	Yes	Yes
PDF Printing Widget	Yes	Yes	Yes

	7.0 / 7.5	2021	2022
KML Import Widget	No	No	No
Web Portal Widget	Yes	Yes	Yes
URL Widget	Yes	Yes	Yes
Reports Widget	No	No	No
Query Widget	No	No	No
Stored queries Widget	Yes	Yes	Yes
Object Form Widget	Yes	Yes	Yes
Selection Widget	No	No	No
Selection in a rectangle Widget	No	No	No
Selection in a circle Widget	No	No	No
Selection in a polygon Widget	No	No	No
Create points Widget	No	No	No
Create lines Widget	No	No	No
Create polygons Widget	No	No	No
Create circles Widget	No	No	No
Create buffers Widget	No	No	No
Move or resize Widget	No	No	No
Edit vector geometry Widget	No	No	No
Delete vectors Widget	No	No	No
(fr) Widget Dupliquer	N/A	N/A	No
Thematic Widget	No	No	No
Isochrone widget	No	No	No
Distance Widget	Yes	Yes	Yes
Area Widget	Yes	Yes	Yes
Notes Widget	Yes	Yes	Yes
Annotation Widget	No	No	No
Text Widget	No	No	No
Centre Widget	N/A	No	No
Contextual menu	Yes	Yes	Yes

Legends

Legends can be added to each of the view tabs for the geoconcept map in the mapping portal. There are two ways to do this:

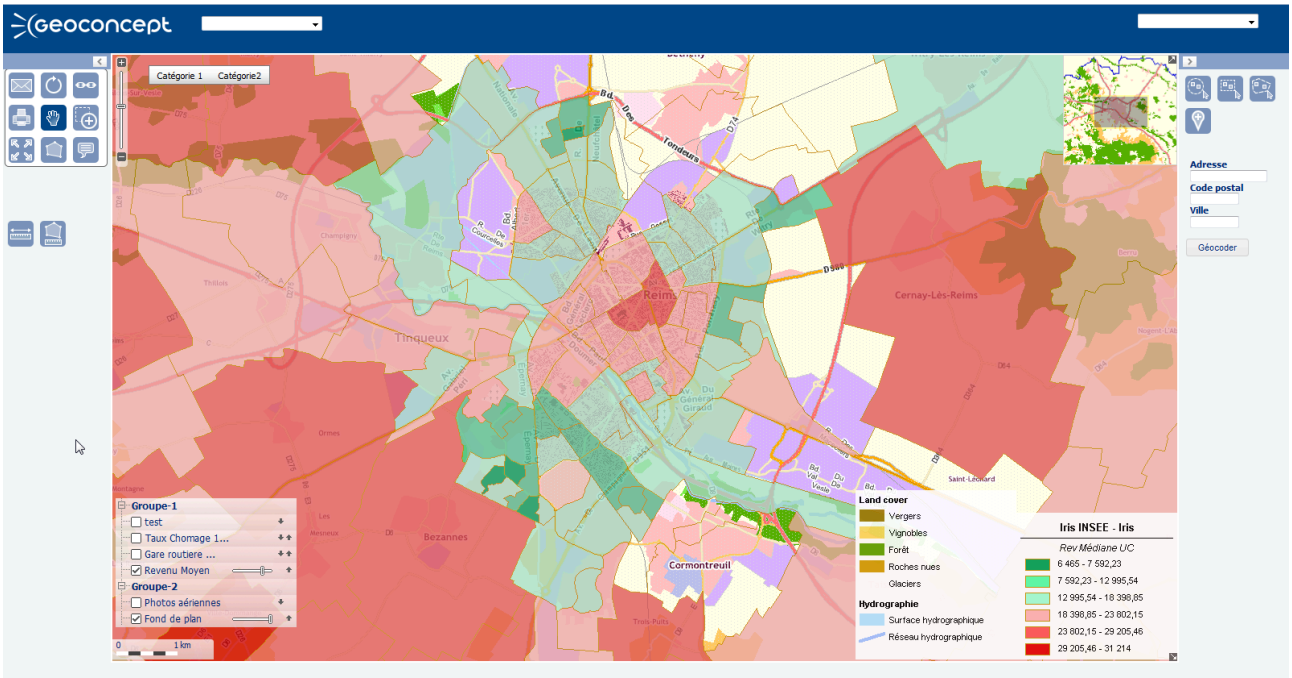
- Use legends that have been configured in Geoconcept (by default),
- Create images manually and save them in the database of images for the application.

Using legends in Geoconcept:

Legends configured in Geoconcept can be used in the web application by applying the following principles:

- Display of virtual layers: the legend for a virtual layer displays automatically without any additional configuration from the moment that the name of the virtual layer is identical to the name of the view tab in which the virtual layer is displayed,
- If the data are displayed without the vehicle of a virtual layer in Geoconcept, the legend displayed in the web application is the Map legend configured in Geoconcept

Example of the display of configured legends in the Geoconcept map

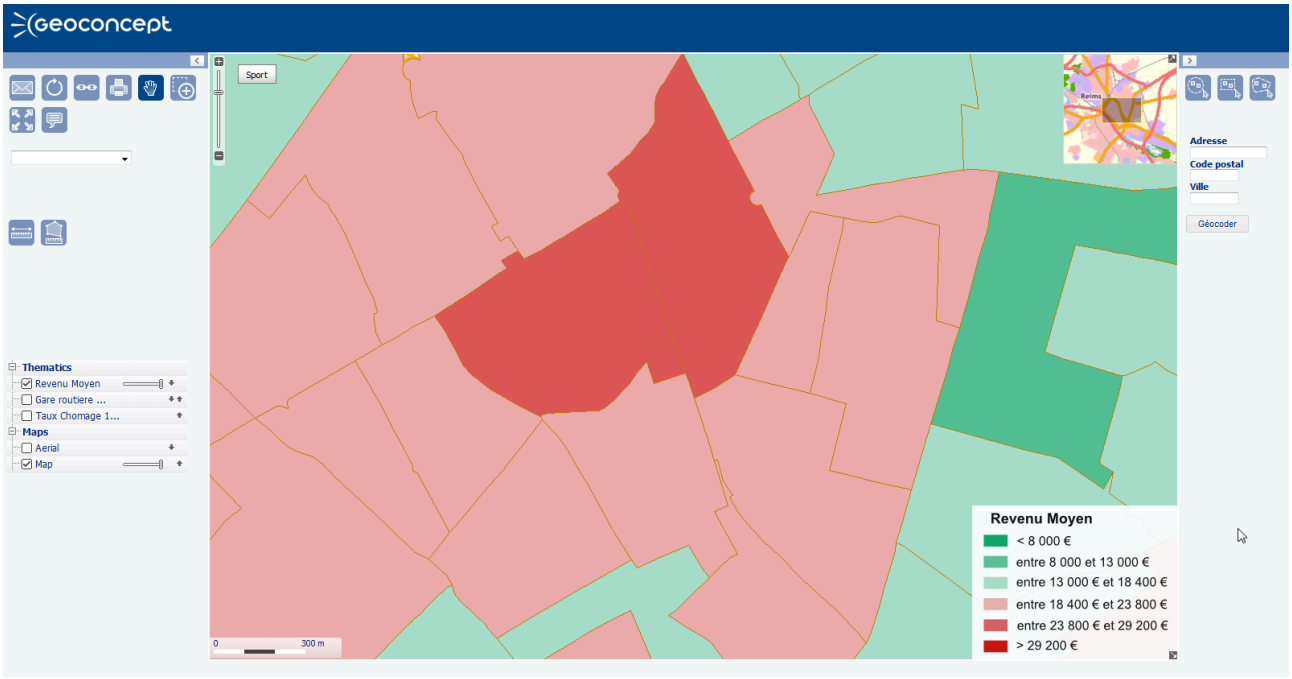


Creating legends in image format:

It is possible to create image files (.png or .jpg) that will be displayed at the same time as the view tab chosen by a user.

This image file must be saved in the Designer image database, like any other image (logo, symbols, …). For the image to be taken into account, you need to define, for each layer, the image to use: in Administration ‣ Layers ‣ Tiled layers ‣ Layer definition for tiled layers, Administration ‣ Layers ‣ Vector layers ‣ Details of single layer for vector layers, or Administration ‣ Layers ‣ Composites layers ‣ Information for the group for groups of layers. There are two possibilities: either you can put a URL under URL for the legend or indicate the presaved image in the Designer under legend image. This will ensure the relation is established automatically.

Example of the display of a customised legend constructed in a drawing application



Customising and configuring legends will be easier when you use the database's own images system.

Handling rights

In Geoconcept Web, it will be possible to restrict access to the mapping portal to just those with authorisation (via a system of identifier and password). This system for managing rights also authorises assignment of rights to the various functionalities or widgets.

This option enables customisation of the functionalities available via the user profile. This system functions thanks to the handling of groups, through two types of steps: one in the Wizard (access to the portal) and one in the Composer (access to functionalities).

Finally, vector layers can also be assigned to a group of users (cf. Vector layers).

Groups and users

The management of groups and of users takes place in the Administration tab, in the Groups and Users menus. For more details, refer to the relevant sections of this documentation.

Access to the backoffice

Five groups exist by default in the application. These five groups dispose of configured rights by default. The existing rights are access rights to certain backoffice functionalities.

The table below summarises the different rights, with a default configuration for the existing groups in the application.

Groups configured by default

Tabs	Administration	Home	Menus/ Functionnalities	All menus
Edit messages	Read messages	List the projects <	Super administrator	X
X	X	X	Administrator	
X	X	X	Advanced contributor	
X	X	<	Contributor	
	X	<	Standard	

Each newly created group can find one or another of its rights attributed, via the check-boxes in the parameters for each group. To access the rights of the group, it will be necessary to click on the “Display group rights” button.

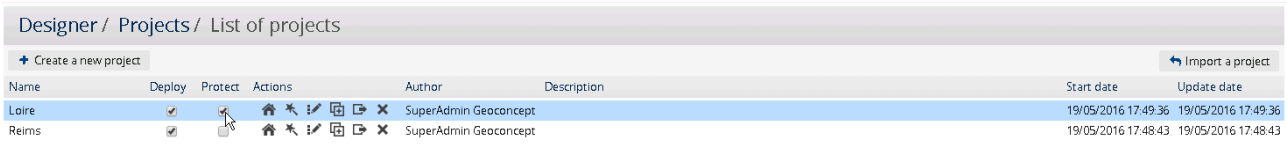
When the cache is checked, the users of the group will be able to access the functionality in the application’s backoffice.

Authorising access to a portal

Access to the defined cartographic portal can be restricted thanks to a series of options, the implications of this being described below.

The first step consists of activating the Protect option in the Designer tab. As soon as this has been activated, the portal is no longer accessible to the public at large. When a user tries to access it, they arrive at an authentication page.

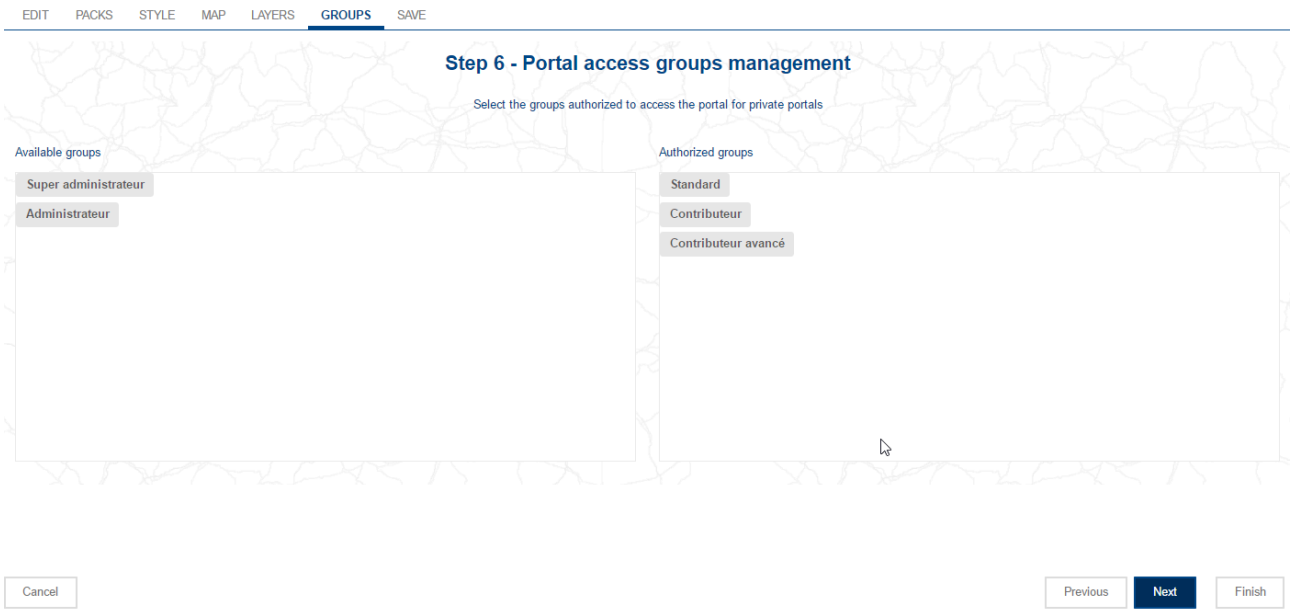
Activation of the Protect option for the mapping portal



All known application users can then connect to, and access,the portal. The notion of accessibility to widgets will be explored in the next section of this document.

In the second step, it is possible to secure the cartographic portal so that it is only accessible to certain groups. This restriction is configured at the level of the Wizard in which the administrator can define the groups having the right to connect to the portal. This configuration takes place at step 6 of the Wizard:

Step 6 of the Wizard: Handling group access to the portal



> If no group is configured in this step and the **`Protected`** option is activated for the project, all the saved users in the application will be able to connect, irrespective of the groups to which they belong.

In this way, in the case of this example, the users of the Standard and Contributor groups will be able to access the cartographic portal. A user from a non-authorised group in this step will not be able to connect and will see a warning message display.

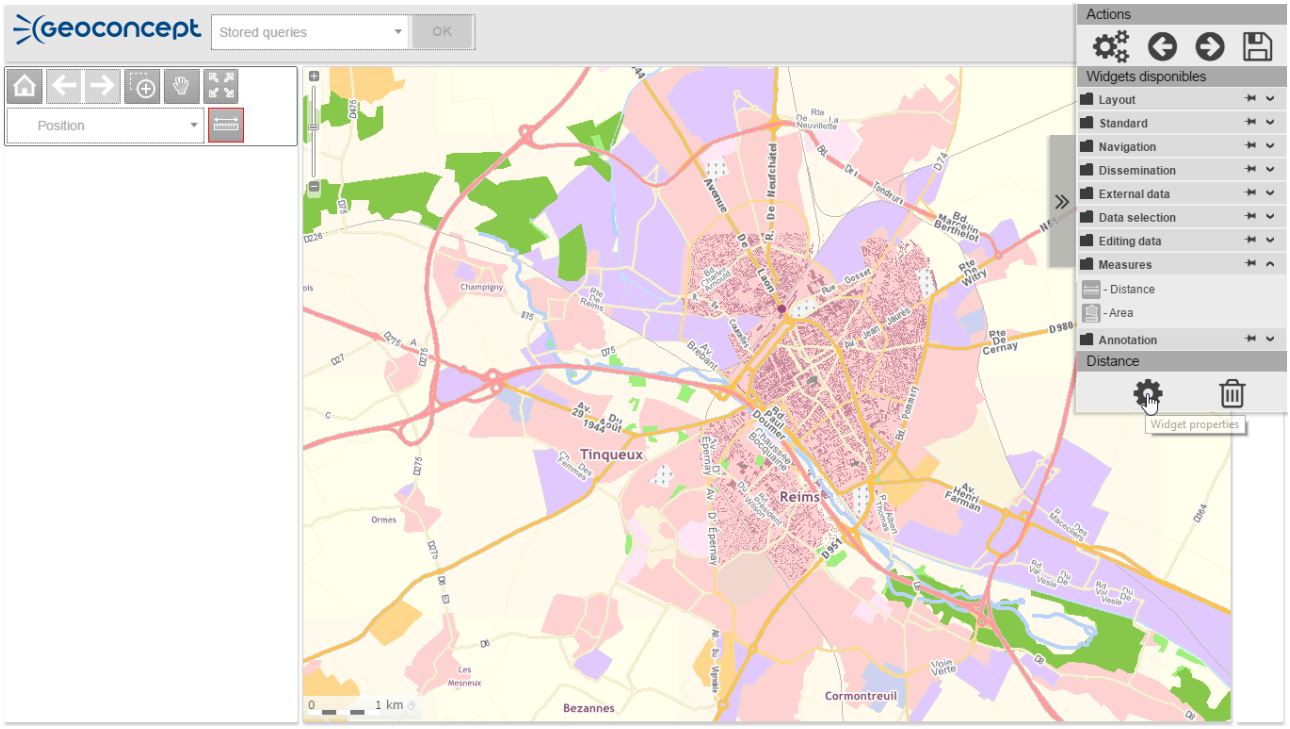
Warning message when a non-authorised user tries to connect

Users will be able to reconnect to the portal via the Reconnect button.

Authorising access to a functionality

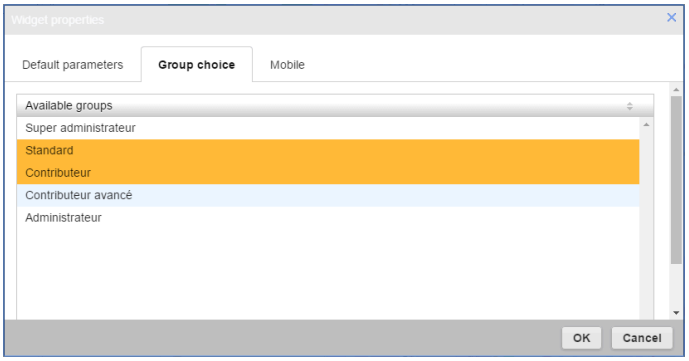
The second level of configuration of rights is handled in the Composer for the web site. Each widget can be available for one or several specified groups. In the Composer, selecting the widget in question draws a red border around it: a property window opens in the lower part of the library.

Modifying Group properties for a widget



Clicking on Modify opens a dialogue: all users in the selected groups will dispose of the functionality in the private cartographic portal. Users are selected with the mouse. Clicking on a selected group allows you to delete the selection.

Selecting groups that will be able to access a selected widget



An Accessible by all users option authorises access to the widget in question for all user groups.

When a user of a non-selected group for a widget connects to the application (on condition they have the rights) they do not see this functionality: the widget is not present.

Editing vector objects

Utilisation rights for data editing widgets are set in the Composer within each widget (creation, geometry modification, deletion and modification of attributes).

Selection tools for vector objects or queries allow you to display the result of the *Search results* table search. In this table, the `Open form` button allows you to edit object attributes directly.

In order to restrict the editing rights in the *Search results* table, you will need to define editing rights - for each vector layer - using the `Groups with rights to edit this layer` parameter in the `Administration ‣ Layers ‣ Vector layers ‣ Details of single layer` menu.

Geographic rights

It is possible to handle specific rights for each user group, depending on the geographic or attributed criteria. This subject is described in the chapter on Administration / Sectors.

Administration

The following paragraphs describe the features available in the Administration tab.

Rights

This section handles rights in Geoconcept Web.

Companies

The Companies dialogue serves to declare the companies to which the Geoconcept Web users belong. This section is linked to the declaration of Groups and Users, as configured in the two dialogues of the same name.

When the Companies section is chosen, it is possible to:

- add new companie,
- edit an existing company,
- delete a compagny.

Add a company

If no company exists, you can only add a new company. If at least one company exists, the list of companies displays and shows:

- their Name,
- their Description.

The Create displays the page for adding companies, and offers:

- the edition of the Company Name,
- the edition of description about the compagny,
- the choice of the skin associated with this company. This choice is made via a drop-down list,
- the choice of logo (used when generating PDF files if no image has been chosen for logo 1 in the Print PDF Widget settings). The selection is made via a drop-down list.

The Save button saves the creation. To cancel the creation, you need to reselect the compagnies section or any other item in the administration menu.

Edit a compagny

A click on the name of an existing company displays the modification page and proposes:

- the edition of the Company Name,
- an option to edit description information,
- the choice of the skin associated with this company. This choice is made via a drop-down list,
- the choice of logo to be used when generating PDF files. This selection is made via a drop-down list.

The Save button saves the creation. To cancel the creation, you need to reselect the Skins section or any other section in the Administration module.

Delete a compagny

To delete a company, you need to:

- click on the name of an existing company, in order to display the modification page,
- click on the Delete button.

Users

The Users section handles Geoconcept Web users.

The description of functionalities is available in the relevant section of the documentation (cf. the section called “Handling rights”).

The Users section enables handling of all users of the web application. This section is linked to the declaration of Groups for the application, formed in both sections of the same name. A user is associated to a group of users.

Operating principles

When the Users section is chosen, it is possible to:

- add new users,
- edit an existing user,
- delete a user.

The list of users displays and presents:

- their Name,
- users' First names,
- an Identifier for each user,
- the Group to which each user belongs,
- as well as the authentication source.

The Create button displays the page for adding users, and proposes:

- an edit function for modifying the user’s Name,
- an edit function for modifying the user’s First name,
- an edit function for modifying user Identifiers (used when connecting to the application)
- an edit function for modifying user Password (used when connecting to the application),
- an option to select an Active or De-activated status for the user, using a check-box,
- an edit function for modifying the user’s Telephone number,
- an edit function for modifying the user’s Email address,
- the choice of Group the user will belong to. This is selected in a drop-down list. The groups available in this list are defined in the administration module, and the Groups section,
- the choice of the user’s company or organisation,
- the choice of the authentication source.

The Save button saves the creation. To cancel the creation, you need to reselect the Users section, or any other section of the administration module.

Clicking on the name of an existing user displays the modification page, and proposes:

- an edit function for modifying the user's Name,
- an edit function for modifying the user's First name,
- an edit function for modifying user Identifiers (used when connecting to the application)
- an edit function for modifying user Password (used when connecting to the application),
- an option to select an Active or De-activated status for the user, using a check-box,
- an edit function for modifying the user's Telephone number,
- an edit function for modifying the user's Email address,
- a choice of Group to which the user will belong. This selection is made via a drop-down list. The groups available in this list are defined in the Groups section of the Administration module.
- the choice of the user's company or organisation,
- the authentication provider source (this cannot be edited).

The Save button saves the modifications. To cancel the modifications, reselect the Users section or any other section of the administration module.

To delete a user, proceed as follows:

- click on the name of an existing user, to display the modification page,
- click on the Delete button.

Origins

The Origins section serves to configure the authentication providers (cf. the section of the documentation called Centralised authentication).

Groups

The Groups section enables handling of the web application's user groups.

The description of functionalities is available in the relevant section of the documentation (cf. the section called "Handling rights").

The Standard group has no rights with respect to parameter settings: it only has the option to view messages (created by users of the Super Administrator group) on the Home page.

When the Groups section is chosen, in theory, it will be possible to:

- add new groups,
- edit an existing group,
- delete a group.

If no group exists, it will only be possible to add a new group. If at least one group exists, the list of groups displays and presents:

- their Name,
- their Description.

The Create displays the page for adding groups, and proposes:

- an option to edit the group Name,
- an option to edit information about the Group Description,
- the possibility of indicating that this group is Super Administrator. If this option is not chosen, the group created is identical to the Standard default group,
- (fr) les paramètres de position à l'ouverture des portails (coordonnées et échelles).

The Save button saves the creation. To cancel the creation, you need to reselect the Groups section or any other section of the administration module.

A click on the name of an existing group displays the modification page and offers the option to:

- an option to edit the group Name,
- an option to edit information about the Group Description,
- the possibility of indicating that this group is Super Administrator. If this option is not chosen, the group created is identical to the Standard default group,
- les paramètres de position à l'ouverture des portails (coordonnées et échelles).

The Save button saves the modifications. To cancel the modifications, you need to reselect the Groups section or any other section of the administration module.

To delete a group, you must:

- click on the name of an existing group, in order to display the modification page,
- click on the Delete button.

Altering or editing groups is not recommended. By default, we advise using the Super Administrator group for one or more administrators handling the settings for the platform.

Sectors

The sector section allows handling of geographic rights, by user group, on vector objects stored in a database, the principle of which is described in the Vector layers chapter.

To understand the operating principle more fully, we will look at an example:

- A territory divided into 3 sectors, for example, *'North*', *'South*' and *'West*';
- Inside each of the zones, only the members of the groups of users defined can display, and so ultimately edit or modify, the objects in the hydrant layers, for example *'Northern Group*', *'Southern Group*', and *'Western Group*';
- As a pre-requisite, it will be necessary that the *'Zone*' field is assigned a value for each hydrant, with for example, *'N*', *'S*', and *'W*' or any other label enabling identification of the sectors to which they are associated.

To use the function, proceed as follows:

- In the first instance, you need to create the users and user groups cf. the Groups section;
- Secondly, you need to identify the field used as a sector code. This choice is made via the Administration / Layers / Vector layers menu, choose the layer to which a right will be attributed, and then in the *'Fields*' tab check the *'Sector*' check-box. A single *'Sector*' can be defined per layer. In our example, it is the *'zone*' field" that is checked.
- Finally, the third step is to create the list of sectors in the Sectors section. Add a Sector with:
  - Name: *'Northern*'
  - Value: *N*
- Group: *'Northern Group*'. You can associate several groups by choosing them one by one in the list.

By default, only the groups associated to a sector can gain access to the corresponding layer, as a result the other groups do not have access.

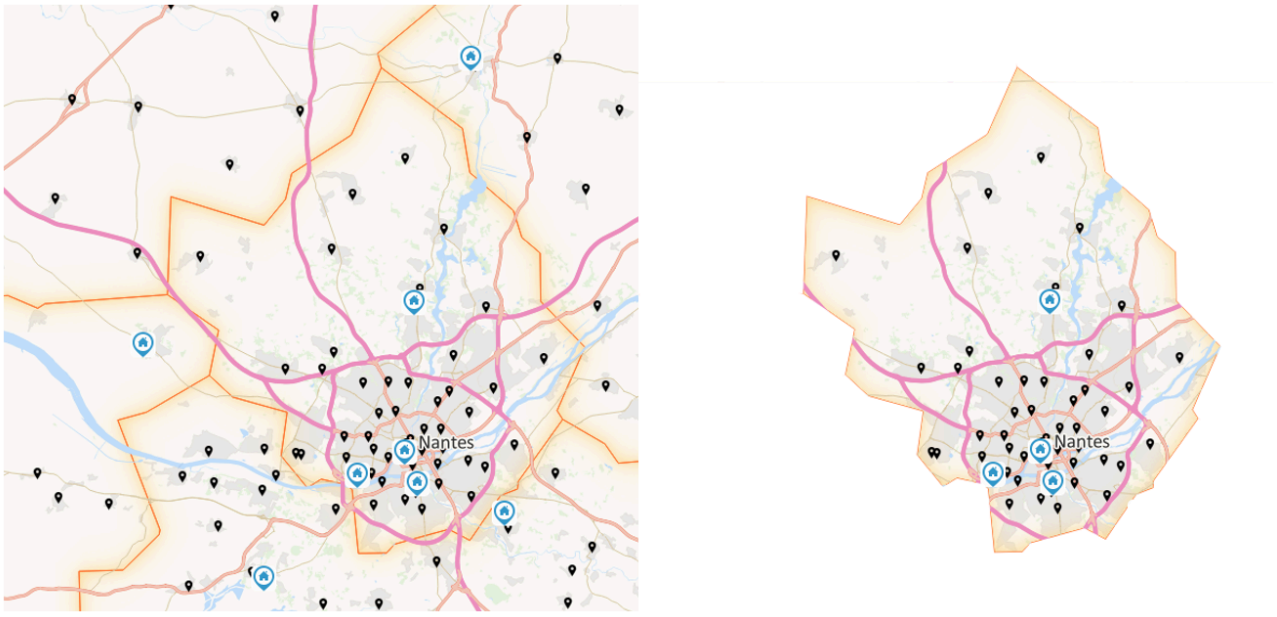
The layers having a checked “Sector” checkbox cannot be used in queries.

Use sectors to create masks as a function of users

It is also possible to use this functionality to create a mask over the map using a polygon vector layer. This means polygons can be used to mask a section of the map as a function of user groups. To apply this method, simply use the “different from” operator.

In the example cited above, you will need to apply a “different from” value of: “N”. In this way a mask will be displayed on all the different sectors for users of the “Northern group”.

Example of utilisation with and without a mask



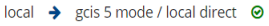
(fr) Connexions utilisateurs

(fr) Le section Connexions utilisateurs permet de lister les connexions des utilisateurs. L'identifiant, le nom, le prénom, la date et l'heure de la dernière connexion sont listés dans le premier tableau. Un clic sur un utilisateur permet de voir l'historique de ses connexions.

Maps

Service

This first tab displays information that allow verification of the correct functioning of the map display component.



the green icon indicates correct configuration of the application.

conversely the red icon indicates that the configuration is incorrect

In the event of an error, check the value of the "geographics.server.gcisServer" parameter cf. the section on Parameters.

Maps

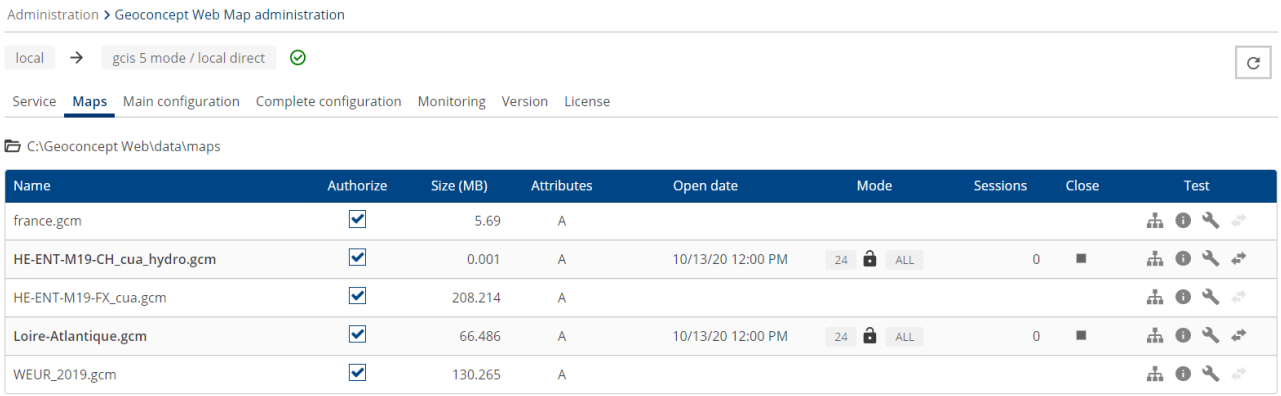
The list of maps available in the publication directory (defined in the Main configuration tab).

For each of the maps listed, the following information and action items are proposed:

- Name: name of the map
- Authorise: allows a map to be locked to prohibit, temporarily for example, its dissemination
- Size: Size in Mbytes of the map
- Attribute: Read write / Read-only (depending on the attributes stored in the GCM/GCR files)
- Opening date: Date and Time of the start of the current opening period
- Scale number: 12 or 24 scales depending on the configuration of the map
- Mode
  - Map opening mode (padlocks): Read write / Read only, are edited by changing the "Opening mode" parameter in the "Main configuration" tab, and then opening the map.
  - Object loading mode ("ON_REQUEST","ALL","FULL")(cf. Main configuration tab)
- Sessions: Number of sessions open simultaneously on the map
- Close: Closes the map
- Tester
  - Map structure: XML of the Geoconcept map
  - Map metadata: list of the following map components (View tabs, Logical scales, Positions, Ratios, Units, Precision, Limits, Projections, Editor, Copyright, …)

- Map tester: enables testing of the map by choosing: View tabs, Image size, Position, Image center and Logical scale
- Map links status: displays the various links for the map and their status (activated, deactivated, disconnected, in error, …)

Example of list of available maps display



Main configuration

Enables definition of utilisation modes and the folder in which maps in Geoconcept format (*.gcm, *.gcr) utilisable in the application are stored.

- A single *'Directory*' folder may be defined, and the full set of its sub-directories can also be used to store Geoconcept maps.
- In *'Startup mode*', for best performances, and if write-access to the map is not required, give priority to *Read-only* mode.
- *'Object loading mode*': modifications are taken into account by closing and then re-opening the map. Possible modes are as follows:
  - Defined in the map (by default)
  - Load objects as and when needed: loads objects as and when needed, and is faster for loading but slightly slower when interrogating objects.
  - All: loads all objects on opening the map. This offers ideal performances, because all the objects are loaded into memory, but it is significantly slower to actually open the map, and especially if the map is voluminous. This mode requires more server memory.
  - Full: identical to All but also loads all object attributes, and is therefore a bit slower on opening the map and has a higher memory requirement.

Complete configuration

Map utilisation parameters

Of the most important parameters:

- Clipart PNG, EMF, WMF, SVG, … (gc.Map Directory.ClipartDirectory), indicates the folder (or folders, with ; characters as separators) in which cliparts are stored, for example: *c:\Symbols\; c:\Geoconcept Web\data\GC\Symbols*

- SBL Symbols (gc.Common.SymbolsDirectory), indicates the storage folder in which symbols are stored, for example: c:\Geoconcept Web\data\GC\Symbols_
- Raster (gc.Picture Directory.Path), indicates the raster storage folder (or folders, with ; as separators), for example *c:\Program Files\GEOCONCEPT\Geoconcept Web\data\maps\raster; c:\Geoconcept Web \data\maps\GC\Images*
- ExtraDrawSize (gc.Common.ExtraDrawSize), indicates the value in pixels (15 by default). It can be useful to increase this to prevent the drawing of some layers (Publisher, label, symbols) being truncated. Generally speaking, it is not useful to go over 200 pixels. For symbols, use half the maximum symbol size value. Increasing this value can significantly affect tile drawing performances.
- Publication folder (gcis.map.directory), indicates the directory (and any sub-directories) where Geoconcept maps are stored (identical to the *'Directory*' field in the *'Main configuration*' tab, for example: *c:\Geoconcept Web\data\maps*)
- Localisation (gcis.map.defaultLocale), indicates the localisation used by queries in the Geoconcept map)for example, *en_US, FR,* …), enabling, for example, definition of separators for quantities expressed as thousands (FR ⇒ 2 345, en_US ⇒ 2,345, …).

Monitoring

Allows surveillance of the various application processes.

The global status colour indicates execution tracking status, however this does not affect the application. For example, if a query requests an image of a map with a visibility that does not exist, the query returns an error but does not have an impact on execution tracking.

- green: no query has ever been considered to be anomolous
- orange: at least one query has taken more than 30 seconds to respond
- red: at least one query has taken more than 5 minutes to respond

This status is definiteively acquired (up until the next start-up), if it has turned orange or red, it will never return to green.

Version

Supplies version information for the different libraries used by the Geoconcept Web Map kernel.

License

Provides license information.

Cache

> You will need to make sure the disk storing the cache has sufficient available disk space.

Geoconcept Web uses a cache manager that allows maps to be published in sections, or small-sized tiles: this cache mechanism has several levels, enabling in this way optimized display performances.

These tiles are stored:

- on the one hand, in the browser cache, thereby conserving displayed components and side-stepping the need for one or several calls to be made via the server;
- on the other hand, on the mapping server, the tiles calculated are conserved within the map server cache both in RAM and on the disk. If a user consults the position visited earlier by another user, their query will be equivalent to a request for the display of the same tiles, These tiles are present in the server memory cache, and so the new user will then benefit in terms of much shorter response times.

The server memory and disk caches, and the browser cache, together make up the so-called «triple cache».

These tiles are classified in a tree structure made up of several directories, built on the basis of wmts_map name__tab name_format_size_logical scale of the Geoconcept map.

Application

The file path to the cache determines which directory stores tiles for the maps used in Geoconcept Web. This filepath can be edited from the settings page under Administration / Cache - Tiles cache path directory.

The overall space taken up on the disk is displayed along with individual directory disk space *footprints* as listed in the table below.

- The Update metadata button allows you to update metadata for all maps used to generate caches. This action is needed when certain elements of the map (scales, rectangle imprints…) have been edited via the Geoconcept GIS.
- Use the Delete button to select, from the available layers, those to be deleted. Checking the corresponding layers in the tree, the administrator can select and delete all or several Maps / Layers / Scales (the last figure listed in the layer name) in a single step. The corresponding cache stored in the RAM is also deleted.
- Use the Delete all button to delete all existing caches whether on the disk or in RAM. This also updates the metadata for all maps and increments the version number of the layer. A confirmation message allows the user to validate, or not, this action.

The actions of the 3 preceding buttons are applied without any interruption to the service. If the layers are already published, it will not be necessary to request that users delete their browser cache; it will suffice - from the layer manager *Administration / Layers / Tiled layers* for each layer concerned, to click on the Update button. This action will increment the version number for the layer, which is in turn automatically updated on all portals. There is no additional manipulation required on the part of the user.

Advanced

From Google Chrome *Menu / History / Delete browsing data…* check *images and files in the cache* then *Delete browsing data*. The CTRL+SHIFT+DEL shortcut gives you rapid access to the *Delete browsing data* window.

From Mozilla Firefox *Menu / Options / Privacy / Delete recent history* check *cache* then *Delete now*. The CTRL+SHIFT+DEL shortcut allows you to rapidly arrive at the *Delete all history* window.

From Internet Explorer *Tools / Internet Options / General tab General / Delete* check *Internet Files and Temporary Web site files* then *Delete*. The CTRL+SHIFT+DEL shortcut allows you to rapidly arrive at the *Delete browsing history* window.

From Microsoft Edge *Settings / History / Delete browsing data* check *Images and files placed in the cache* then *Delete now*. Use the CTRL+SHIFT+DELETE shortcut to rapidly move to the *Delete browsing data* window.

If needed, you can empty the RAM without deleting tiles stored on the disk by simply shutting down and restarting the Tomcat service.

Images

The Images section handles a series of images used in Geoconcept web. These may, for example, be pictograms or symbols to be used for the display of business site information associated to points in a map. The images may also serve to customise the design of the site.

Images are saved by default so that the functionality can be used as standard (logos, bullet points, ….). These images can be used just like any other image.

In the event of a bulk importation, the user can import a series of images using Import .

> To import a large number of images, the user should have first grouped all the files concerned in a .zip archive.

Operating principles

When the Images section is chosen, it is possible to:

- add new images individually, or several at a time, via the "import" function,
- modify an existing image,
- delete an image.

If no image exists, it will only be possible to add a new image. If at least one image exists, the list of images displays and shows the image Name(s).

The Create button displays the image addition page, and proposes:

- an option to edit the image Name, this name being a logical name used subsequently in the application to call this image (without using special characters or spaces),
- an edit facility to modify information about the image Description,
- an Add image option, by entering the access path, the name and file extension of the image to add, or by clicking on the Select an image file button enabling a search on the local disk or local network,

The Save button saves the creation. To cancel the creation, reselect the Images section or any other section in the administration module.

Clicking on the name of an existing image displays the modification page and proposes:

- an option to edit the image Name, this name being a logical name used subsequently in the application to call this image,
- an edit facility to modify information about the image Description,
- an Add image option, by entering the access path, the name and file extension of the image to add, or by clicking on the Select an image file button enabling a search on the local disk or local network,

The Save button saves the creation. To cancel the creation, reselect the Images section or any other section in the administration module.

To delete an image, proceed as follows:

- click on the name of an existing image, to display the modification page,
- click on the Delete button.

Skins

The Skins section handles style sheets (CSS 2 or CSS 3) used to customise the skin of portals. A series of style sheets exist by default. However, it is possible to add extra style sheets via this menu. An example of a style sheet is supplied in the appendices.

When the Skins section is chosen, it is possible to:

- add new skins,
- modify an existing skin,
- delete a skin.

The list of skins displays and presents:

- the names of the groups,
- their default skin status,
- their Description.

Adding a skin:

The Create displays the skin addition page, and proposes:

- an option to edit the skin Name, this name being a logical name used subsequently in the application to change the style in the wizard,
- an option to edit information about the skin Description,
- the choice of File to use, by entering the file access path, the name and extension of the skin to add,
- editing the CSS style sheet in a memo parameter provided for that purpose.

The Save button saves the creation. To cancel the creation, you need to reselect the Skins section or any other section in the Administration module.

Modifying a skin:

Clicking on the name of an existing image displays the modification page and proposes:

- entering the Annotation name, this name being a logical name used subsequently to call or change the annotation via the Appearance drop-down list,
- an option to edit information about the skin Description,
- the choice of File to use, by entering the file access path, the name and extension of the skin to add,
- editing the CSS style sheet in a memo parameter provided for that purpose.

The Save button saves the creation. To cancel the creation, you need to reselect the Skins section or any other section in the Administration module.

Deleting a skin:

To delete a skin, proceed as follows:

- click on the name of an existing skin, in order to display the modification page,
- click on the Delete button.

Parameters

Geoconcept Web's most commonly used settings can be viewed and edited rapidly via the Settings page. The full list of settings can be accessed via this page using the Advanced settings button.

Note also, by default, the sub-folders needed by Geoconcept Web are stored under "C:\Geoconcept Web" designated by `"<DATA_HOME>"` below.

Settings are stored under the following sub-sections:

Local data

Summary list of all settings relating to data sources (Geoconcept maps, geocoding files, auto-complete or road network files).

Name	Description	Parameter	Default value
Map - Path directory	Storage directory for maps in Geoconcept format (,gcm, .gcr)	gcis.map.directory	"<DATA_HOME>"\data \maps
Geocoding - Geocoder datasource name	Repository used for geocoding	geocoder.datasource	Loire-Atlantique/Loire-Atlantique.ugc.mdi
Autocompletion - Autocomplete path directory	Storage folder for auto-complete indices	geocoder.autocomplete.datasource	Autocompletion
Route Calculation - Route datasource name	Road network name	iti.graphname	Loire-Atlantique

Cloud data

Lists the full set of parameters needed to access Geoconcept's Cloud API: Geoptimization API

Name	Description	Parameter	Default value
Configuration - GeoAPI configuration URL	URL providng the list of available web services	services.geoapi.configuration.url	https://api.geoconcept.com/EU/GCW/geoconcept-web/api/internal/geoservices/list
Configuration - GeoAPI Zone	Choice of the continental block to use (SAME = South America, NAME = North America, AFME = Africa - Middle East, IN = India, JP = Japan, EURO = Europe, APAC = Asia - Pacific, OCEA = Australia and Oceania)	services.geoapi.configuration.zone	EURO
Activation	List of web services to activate	services.geoapi.activation… (true / false)	false

Display

Summary list of parameters for symbols, images or drawings.

Name	Description	Parameter (Administration / Maps / Full Configuration)	Default value
Symbols - Clipart path directory	Clipart directory	gc.Map Directory.ClipartDirectory	"<DATA_HOME>"\data \maps\GC\Symbols
Symbols - Symbols path directory	Symbols (.sbl) directory	gc.Common.SymbolsDirectory	"<DATA_HOME>"\data \maps\GC\Symbols
Raster - Raster path directory	Raster directory	gc.Picture Directory.Path	"<DATA_HOME>"\data \maps\maps\GC\Images
Parameters - ExtraDrawSize	Value in pixels for the drawing (find out more here)	gc.Common.ExtraDrawSize	15

Widget

Defines parameters relating to portal widgets

Name	Description	Parameter	Default value
Document - Documents path directory	Directory for storing documents	easy.documents.repository	"<DATA_HOME>"\data \documents
Mail - Portal administrator mail	Setup for the Geoconcept Web administrator's email	easy.widgets.mail	mail.mail@company.net [mailto:mail.mail@company.net]
Note - Notes administrator mail	Definition of the widget administrator email *'NOTES'*. It is possible to add several email addresses with ; as separator	easy.widgets.note.mail	mail.mail@company.net [mailto:mail.mail@company.net]
PDF - Templates path directory	Directory in which the templates used by the *'PDF PRINT'* widget should be stored	htc.export.templateDirectory	"<DATA_HOME>"\data \pdftemplates

Name	Description	Parameter	Default value
PDF - Pictures path directory	Directory for export of images used by the “PRINT PDF” and “SCREEN SHOT” widgets	htc.export.directory	“<DATA_HOME>”\temp \export
Reports - Reports path directory	Directory for storing reports exploited in a Geoconcept Web project	easy.webservice.report.publish	“<DATA_HOME>”\data \gcws\reports
Reports - Upload path directory	Download folder for maps and reports	easy.webservice.upload	“<DATA_HOME>”\temp \gcws\data

Publish

Folder for maps published via the Geoconcept GIS (more information here).

Name	Description	Parameter	Default value
Map - Publish path directory	Directory for publishing a project (files for the published Geoconcept map)	easy.webservice.publish	“<DATA_HOME>”\data \map

Administration

Filepath for storage of tiles, logs and images

Name	Description	Parameter	Default value
Cache - Tiles cache path directory	Storage filepath for the cache of generated tiles	geographics.cache.path	“<DATA_HOME>”\cache\tiles
Cache - Logs path directory	Storage directory for logs concerning the generation of the cache	geographics.cache.logDirectory	“<DATA_HOME>”\cache\logs
Images - Images path directory	Directory for the import of images	images.import.directory	“<DATA_HOME>”\temp \images

Advanced parameters

The Advanced settings section provides a useful summary of all Geoconcept web parameters.

Basic parameters with default settings are added automatically on application start-up, when the software is first loaded. However, new parameters can be added manually.

When the Advanced settings section is selected, you will be able to:

- add new parameters,
- edit an existing parameter,
- delete a parameter.

The list of parameters for the application display in the form of a hierarchical tree resembling a file explorer application. Groups of parameters are represented by folders, the parameters are represented by a file icon.

List of parameters present:

- the names of the groups,

- their Value,
- their Description.

Adding a parameter:

Clicking on the Create button at the lower left-hand corner of the tree displays the addition page for groups, and proposes:

- an option to edit the parameter Name,

Any parameter that must be integrated within an item in the existing hierarchical tree must be added following the syntax: folder.folder.parameter. The tree separator is a full stop.

Adding the map parameter to the geographics folder is performed by typing in the name: geographics.map

In addition, you will need to enter:

- details of the Group description,
- the Value associated to this parameter.

The Save button saves the creation. To cancel the creation, click on Back, or reselect the Parameters section or any other section of the administration module.

Editing a parameter:

Clicking on the name of an existing parameter displays the modification page and proposes:

- an option to edit the parameter Name,
- an option to edit information about the Group Description,
- an option to edit the Value associated to this parameter.

The Save button saves the modifications. To cancel the modifications, click on Back, or reselect the Parameters section or any other section of the administration module.

Delete a parameter:

To delete a parameter, proceed as follows:

- click on the name of an existing parameter, to display the modification page,
- click on the Delete button.

List of parameters

Below, a list of existing parameters in the application (non-exhaustive), with a description and the type of value that one can find by default, or assign:

Note also, by default, the sub-folders needed by Geoconcept Web are stored under “C:\Geoconcept Web” designated by **“<DATA_HOME>”** below.

Name	Description	Default value
authentification.changePassword.excludeSuperAdmin	True to force accounts linked to the “Super administrator" group to not use password strength. To ensure the same behaviour as for other users, set the value to "false”	true
authentification.changePasswordEveryXDays	The number of days before the password must be changed	60
authentification.changeRegularlyPassword	True to force the regular change password (false/ true)	true
authentification.cryptPasswords	Enables encryption of the passwords during the authentication process (false/true)	true
authentification.forceChangePasswordOnFirstLogin	True to force password change at first login (false / true)	true
authentification.loginIsCaseSensitive	The login is case sensitive (false / true)	true
authentification.multitenant	Multi tenant application (restart needed) (false / true)	false
authentification.robustness.activate	Activate password robustness management (false / true)	true
authentification.robustness.configuration	Password robustness configuration	{"hasDigit":true;"hasLowerCaseCharacter
autotest.startup.test	This functionality allows you to run verification queries on application start-up. These queries and the response generated are contained in the Tomcat logs. The *'false*' value de-activates this functionality (false / true)	false
cityportal.order.category	This enables soring of categories on *'Name* or on *'orderNum*'	orderNum
cityportal.order.subCategory	Allows sorting on sub-categories by *'Name*' or by *'orderNum*'	orderNum
database.autoUpdate	Database updated automatically if this parameter is activated (false / true)	true
database.checkSuperUser	Verifies that a super user exists at start-up (false / true)	true
easy.documents.maxUploadSize	Maximum size for imported documents	
easy.documents.repository	Directory for storing documents	“<DATA_HOME>”\data \documents
easy.objectManagement.hideMenu	Hide Object Management menu (false / true)	true
easy.webservice.encoding	Web service encryption	Cp1252
easy.webservice.md5tester	Activates a verification procedure to find out whether a file download or transfer has been correctly performed (false / true)	true
easy.webservice.publish	Directory for publishing a project (files for the published Geoconcept map)	“<DATA_HOME>”\data \maps
easy.webservice.report.publish	Directory for storing reports exploited in a Geoconcept Web project	“<DATA_HOME>”\data \gcws\reports

Name	Description	Default value
easy.webservice.upload	Download folder for maps and reports	“<DATA_HOME>”\temp \gcws\data
easy.widgets.mail	Setup for the Geoconcept Web administrator’s email	mail.mail@company.net [mailto:mail.mail@company.net]
easy.widgets.note.mail	Definition of the widget administrator email *'NOTES*'. It is possible to add several email addresses with ; as separator	mail.mail@company.net [mailto:mail.mail@company.net]
easy.widgets.path	Directory for loading additional widgets	“<DATA_HOME>”\data \Widgets
easy.widgets.update.cleanerInterval	Choose the time to clean interval for update service	600000
findObject.maxCandidates	Maximum number of candidates uploaded by the object search web service	1000
findObject.findObject.maxDistance	Maximum search distance in metres for the object search web service	100000
geocoder.autocomplete.alias.<alias_name>.Auto_completion.datasource	Creates an alias for a datasource containing autocomplete files if an alias is created, you must indicate, in the parameter key, in the <alias_name> section finally, the value associated to the alias is the name of the directory storing all the files needed for autocomplete to function example: it is required that the datasource has as its alias, “IGN”. the parameter key is therefore: geocoder.autocomplete.alias.IGN.Auto_completion.datasource and the value associated to this key is the name of the machine directory containing all the files, for example: IGN-2014-v1-Geoconcept	(empty)
geocoder.autocomplete.cacheSizeMB	Memory cache allocated to the autocomplete function when it is run for storing the search	300
geocoder.autocomplete.datasource	Name of the folder containing index files for the autocomplete function	Auto_completion
geocoder.autocomplete.maxCandidates	Maximum number of candidates returned by the autocomplete service	10
geocoder.autonavi.GeocodePath	AutoNavi uri path for geocode	/v3/geocode/geo
geocoder.autonavi.acceptLevelsAboveCity	accept geocoding levels above city (county, state, country, etc) as results (otherwise returns no match) (true / false)	false
geocoder.autonavi.batchSize	elements per batch request	20
geocoder.autonavi.connectionStaleCheck	Enable stale check of http persistent connections. Changing value needs restart to be applied. (true / false)	true
geocoder.autonavi.connectionTimeout	Connection to AutoNavi server timeout (in ms). Changing value needs restart to be applied.	30000
geocoder.autonavi.countryOutput	value to use for country field output (eg *CN*, *CHN*, *##*, *PRC*, *##*, *CHINA*, *#######*)	中国

Name	Description	Default value
geocoder.autonavi.defaultScore	score to output	1.0
geocoder.autonavi.exceptionOnError	raise exception on error (true / false)	false
geocoder.autonavi.key	AutoNavi key	(empty)
geocoder.autonavi.maxThreads	maximum execute threads (changing value needs restart to be applied)	1
geocoder.autonavi.serverPathBatch	AutoNavi server for batch requests	http://restapi.amap.com/v3/batch
geocoder.autonavi.serverPathSingle	AutoNavi server path for single element requests	http://restapi.amap.com/v3/geocode/geo
geocoder.autonavi.socketTimeout	Socket to AutoNavi server timeout (in ms). Changing value needs restart to be applied.	30000
geocoder.autonavi.traceAutoNaviResponses	trace AutoNavi server responses when log is set to debug	false
geocoder.autonavi.useBatch	use batch request when there are several geocode to be done (true / false)	true
geocoder.baseScore	Deprecated and used exclusively for the `geocodeScore` parameter as output from the geocoding Web Service. Maximum score for the geocoding result (20 for a score between 0 and 20, or 1 for a score between 20 and 1)	20
geocoder.batchMaxSize	Max allowed batch size	200
geocoder.bing.acceptLevelsAboveCity	accept geocoding levels above city (county, state, country, etc) as results (otherwise returns no match) (false / true)	false
geocoder.bing.autoSelectCultureForCountry	Automatically select culture for given countries ("|" as separator, possible values : JP|KR). Changing value needs restart to apply.	JP|KR
geocoder.bing.confidenceToScore	Map confidence to score (base 1) as : High|Medium|Low|other. Changing value needs restart to apply.	1.0|0.9|0.5|0
geocoder.bing.connectionStaleCheck	Enable stale check of http persistent connections. Changing value needs restart to be applied. (false / true)	false
geocoder.bing.connectionTimeout	Connection to Bing server timeout (in ms). Changing value needs restart to be applied.	30000
geocoder.bing.countryOutput	country output : { ISO2 | name }	name
geocoder.bing.culture	The culture parameter provides resulting address elements in the language of the culture. See https://msdn.microsoft.com/en-us/library/hh441729.aspx.	(empty)
geocoder.bing.exceptionOnError	raise exception on error (false / true)	false
geocoder.bing.key	Bing key	3
geocoder.bing.maxThreads	maximum execute threads (changing value needs restart to be applied)	1

Name	Description	Default value
geocoder.bing.removePunctuation	remove punctuation (false / true)	false
geocoder.bing.serverPath	Bing server path	http://dev.virtualearth.net/REST/v1/Locations
geocoder.bing.socketTimeout	Socket to Bing server timeout (in ms). Changing value needs restart to be applied.	30000
geocoder.bing.tolerateFreeFormAddress	Tolerate free form address, ie complete address set in addressLine field only (except country that still must be set in country field). (false / true)	false
geocoder.bing.traceBingResponses	trace bing server responses when log is set to debug (false / true)	false
geocoder.bing.upperCaseOutputUsingLocale	upper case output using locale	(vide)
geocoder.countryDatasource	former system to apply geocoding on several countries (several reference tables): the idea was to define a common reference table name, with just the country code changing in the filename.	
geocoder.datasource	Name of the reference table to use for geocoding	Loire-Atlantique
geocoder.defaultCRS	Reference coordinates system by default (is applied when the geocoder is used for several countries and when this is not specified in the query)	(empty)
geocoder.filterMinScore	Minimum geocoding response score (0-100)	0
geocoder.here.acceptLevelsAboveCity	Accept levels of geocoding higher than town level (county, state, country, etc) as results (otherwise no positive response will be returned) (false / true)	false
geocoder.here.appCode	Access code for the HERE web service	(empty)
geocoder.here.appId	ID access to the HERE web service	(empty)
geocoder.here.connectionStaleCheck	Activate the HTTP persistent connections test. If the value is changed, a restart of the application server will be needed so the modification can be taken into account (false / true)	false
geocoder.here.connectionTimeout	Time limit for a connection to the HERE web service (in ms)	30000
geocoder.here.countryOutput	Retranscription method for names of ISO2 or ISO3 or name.	ISO3
geocoder.here.exceptionOnError	In the event of an error '*raise exception*' (false true)	false
geocoder.here.language	Choice of a preferred language in the address components displayed in the result. The code for the language must be supplied in conformity with RFC 4647 standards	(empty)
geocoder.here.maxThreads	Maximum number of threads executed (if the value is modified, a restart of the application server will be needed so the changes are applied)	1
geocoder.here.regionOutputAbbreviated	region (state) output abbreviated (true) or full (false). Eg : full=*Iowa*, abbreviated=*IA*	true

Name	Description	Default value
geocoder.here.relevanceGapFactor	Factor to apply to the pertinence deficit ([0..1]). 0: candidates with a score of 1 will have a net relevancy	1.0
geocoder.here.removePunctuation	Remove any punctuation from an address (false / true)	false
geocoder.here.reuseConnections	Allows to disable reuse of http connections by here client (false / true)	false
geocoder.here.serverPath	URL of the HERE web service	http://geocoder.cit.api.here.com/6.2/geocode.xml
geocoder.here.socketTimeout	Limit on the time for a connection to a Socket (in ms)	30000
geocoder.here.traceHereResponses	Track the responses of the HERE server when the journal is configued to '*debug*' mode (false / true)	false
geocoder.here.upperCaseOutputUsingLocale	Response with upper case letters	(empty)
geocoder.jndiName	Name of the Java Naming and Directory Interface (JNDI) API for Universal geocoder	java:comp/env/geoconcept/ugc/default
geocoder.maxCandidates	Maximum number of responses returned by the geocoder	20
geocoder.mode	Geocoding mode : ugc, entities, ziptable	ugc
geocoder.navinfo.acceptLevelsAboveCity	accept geocoding levels above city (county, state, country, etc) as results (otherwise returns no match) (false / true)	false
geocoder.navinfo.administrativeCodeAsPostalCode	Process administrative code as postal code (true or false). (false / true)	false
geocoder.navinfo.confidenceGapFactor	Factor to apply to confidence gap ([0..1]). 0: candidates will have full score. 1: candidates will have raw data confidence.	1.0
geocoder.navinfo.connectionStaleCheck	Enable stale check of http persistent connections. Changing value needs restart to be applied. (false / true)	false
geocoder.navinfo.connectionTimeout	(false / true)	false
geocoder.navinfo.countryOutput	(false / true)	false
geocoder.navinfo.exceptionOnError	raise exception on error (false / true)	false
geocoder.navinfo.inputlang	NavInfo input language { zh_CN | en_US | auto }	zh_CN
geocoder.navinfo.key	NavInfo key	(empty)
geocoder.navinfo.maxThreads	maximum execute threads (changing value needs restart to be applied)	1
geocoder.navinfo.serverPath	NavInfo server path	http://vapi.fundrive.com.cn/geocode
geocoder.navinfo.socketTimeout	Socket to NavInfo server timeout (in ms). Changing value needs restart to be applied.	30000
geocoder.navinfo.traceNavInfoResponses	trace NavInfo server responses when log is set to debug (false / true)	false

Name	Description	Default value
geocoder.navinfo.userid	NavInfo user identifier	(empty)
geocoder.providerThreads	Maximum number of threads per provider, to be changed only when using multiple providers (UGC, Bing, Here, Navinfo, …)	1
geocoder.streetDistance	Fixes the orthogonal offset vale (in metres), on either side of the street segment, taking into account odd and even numbers in the search, applied to the coordinates	5.0
geocoder.streetMinScore	Minimum score allowed for a "street" candidate (0-100)	0
geocoder.zipDatasource	database (name of the jndi resource) to apply geocoding on post code	//
geocoder.zipTable	table name, to apply geocoding on post code. Type of query executed: select X, Y, organisation, street, zipcode, locality, post_town, county from [ziptable] where zipcode = ? , For geocoding on post code, you need the "geocoder.mode" ="ziptable" key.	
geographics.cache.client.cachecontrol	HTTP cache control strategy for tiles impossible to place in the cache	max-age=3600
geographics.cache.client.sizelimit	Limit in bits for a tile to be placed in the cache by the client's cache (0 for no limit)	0
geographics.cache.layerInfoMaxAgeInSeconds	Maximum cache duration for information on layers, and 24 hours by default (86,400 sec.)	86400
geographics.cache.logDirectory	Storage directory for logs concerning the generation of the cache	"<DATA_HOME>"\cache \logs
geographics.cache.nbRetries	Number of attempts to generate each tile	3
geographics.cache.nbthreads	Number of threads used for the production of the cache	2
geographics.cache.path	Filepath to define for storing the cache generated	"<DATA_HOME>"\cache \tiles
geographics.cache.sizelimit	Limitation in bits to ensure that a tile is placed in the cache by the Geoconcept web cache (0 for no limitation)	0
geographics.cache.timeout	Limit on the time for a connection (in ms)	30000
geographics.dynamicLayer.transparentColor	Colour used for transparency in dynamic layers (hexadecimal value)	0xFFFFFFFF
geographics.gcis.responseCharacterEncoding	Name of the encryption for Geoconcept Web Map responses	Cp1252
geographics.gcis.urlCharacterEncoding	Encryption name for the URL	Cp1252
geographics.map	Map loaded by Geoconcept Web Map	Loire-Atlantique.gcm
geographics.server.gcis.applyLicenseChanges	Applies the Geoconcept Web license change to Geoconcept Web Map (true / false)	true
geographics.server.gcis.connectionTimeout	Time limit for a connection to Geoconcept Web Map (in ms)	30000

Name	Description	Default value
geographics.server.gcis.detectVersion	Detects the version number of Geoconcept Web Map (false / true)	true
geographics.server.gcis.forceVersion	Forces the version of Geoconcept Web Map (eg "4.5")	(empty)
geographics.server.gcis.gcisServerCharset	Type of coding of characters for geoconcept Web Map. Example, if Latin-1 or Western Europe:ISO-8859-1 / if Japanese language: shift_jis / …	ISO-8859-1
geographics.server.gcis.gcisServerLocale	Defines the language used on the server for formatting numbers in responses issued by Geoconcept Web Map. if French language: fr_FR if Japanese language: ja_JP / …	fr_FR
geographics.server.gcis.localDataCharset	Character set for the application server. By default, UTF-8	UTF-8
geographics.server.gcis.maxTotal	Total number of connections authorised	200
geographics.server.gcis.password	Password for the Geoconcept Web Map administration console	gcis
geographics.server.gcis.permanentVersionDetection	Ongoing detection of the version of Geoconcept Web Map (false / true)	false
geographics.server.gcis.resetPhysicalSize	Automatic reset of the physical size during queries from Geoconcept Web Map (false / true)	true
geographics.server.gcis.socketTimeout	Limit on the time for a connection to a Socket (in ms)	30000
geographics.server.gcisServer	URL for accessing the Geoconcept Web Map server. “local” or the url of a remote server, for example: http://my-pc:81/geoconcept-web/gc in the format http/s://<SERVER/IP>:<PORT>/<APPLICATION>/gc	local
geographics.server.mapServer	URL for accessing “GC Servlet”: relay to Geoconcept Web Map	/geoconcept-web/gcservlet
geographics.server.tileServer	URL for access to *'Tile Servlet*': requests a tile and puts it into the cache if *'mpas*'. If *'mapsd*', it is not put into the cache	/geoconcept-web/maps
geographics.tiles.forcegcispng8	Force Geoconcept Web Map to generate 8-bit png images. This function can require a specific configuration of geoconcept Web Map(false / true)	false
(fr) geographics.vectorLayer.legacyStyles	(fr) Active les anciens styles des couches vectorielles. (false / true)	false
geographics.vectorLayer.refreshInterval	Interval in milliseconds (ms) to refresh vector layers.	60000
htc.compatibilityMode.server	Authorises the server to return tiles if no layer has been defined for these tiles (false / true)	true
htc.export.cleanerInterval	Time interval in milliseconds (ms) for cleaning to take place	3600000

Name	Description	Default value
htc.export.directory	Directory for export of images used by the “PRINT PDF” and “SCREEN SHOT” widgets	“<DATA_HOME>”\temp \export
htc.export.templateDirectory	Directory in which the templates used by the *'PDF PRINT'* widget should be stored	“<DATA_HOME>”\data \PDFtemplates
htc.export.templateGeneratorInterval	Time interval (in ms) for clean-up	3600000
i18n.defaultLanguage	Default language for internationalisation	en
images.import.directory	Directory for the import of images	“<DATA_HOME>”\temp \images
iti.batchRoute.maxSize	Maximum number of journeys for batch queries	100
iti.batchRoute.threads	Number of threads used for batch queries	1
iti.cost	Route calculation method. 0 or “time”: fastest route via the road network (graph) 1 or “distance”: shortest route via the road network (graph) 2 “flying”: distance as the crow flies, without taking the road network into account	time
iti.graphSnapDistance	Maximum snap-to-graph distance for the road network (in metres)	2000
iti.graphSnapSpeedMPerS	Snap-to-graph speed. If a snap-to-graph distance is indicated, you need to specify the travel speed at which it will be traversed (in metres/seconds - m/s). The usual value is 1.111111111 = 4 km/h	(empty)
iti.graphname	Name of the default routing graph or network	Loire-Atlantique
iti.here.appCode	Application code	(empty)
iti.here.appId	Application id	(empty)
iti.here.matrixInnerHeight	Matrix inner height. maximum is 15.	5
iti.here.matrixUrl	Url for matrix service	(empty)
iti.jndiName	Name of the Java Naming and Directory Interface (JNDI) API for SmartRouting	java:comp/env/ geoconcept/ smartrouting/default
iti.matrix.maxSize	Matrix max size allowed for computations	200
iti.matrix.previousFormatV1	Set to True to obtain the result in the previous format (false/true)	false
iti.optim.autoDetectProvider	iti.optim.autoDetectProvider	(empty)
iti.optim.forceMatrixProvider	Force matrix provider for optim service	(empty)
iti.referenceLevel	Reference level for the graph to use. Possible values are: auto, 2, 3, 4 and 16. 16 signifies that there is no filtering. The auto value adjusts as a function of the distances entered in the iti.referenceLevelSmart.levelX parameters.	4
iti.referenceLevelSmart.level2	Minimum distance in metres to use reference level 2 in matrix and itinerary calculations	3000000
iti.referenceLevelSmart.level3	Minimum distance in metres to use reference level 3 in matrix and itinerary calculations	500000

Name	Description	Default value
iti.referenceLevelSmart.level4	Minimum distance in metres to use reference level 4 in matrix and itinerary calculations	50000
iti.rejectFlags	Indicates the restriction rules to use: exclusion of bridges (bridges), road segments with tolls (toll), etc. To multiply the constraints, it will be nececssary to apply a separator: Toll, Bridge	(empty)
iti.requestsLog.activate	Activates logs (false/true)	false
iti.requestsLog.dumpDirectory	Log storage folder (false / true)	(empty)
iti.requestsLog.timeoutLimit	Time limit above which the query is in timeout so it can be added to the logs in milliseconds	(empty)
iti.soap.destinationAsSecondStep	“true” if the second step is the destination, “false” if the destination is the last step	true
iti.speedProfile	Profile of the vehicle to use	(empty)
iti.useAcceleratedGraph	Utilisation of an accelerated graph. This allows you to improve on performances of the route calculation (false / true)	false
iti.useMetaGraph	Utilisation of a meta-graph. This permits improved route calculation performances (false / true)	true
iti.vehicleId	ID of the default vehicle, 1 = car, 3 = lorry, … (cf. SmartRoutingVehicles.xml catalogue in <GEOCONCEPT_WEB_HOME>\smartrouting\jee \smartrouting\conf\). Important note: for a graph generated from the Geoconcept GIS, the value to use is “0”.	1
mail.host	Address of the messaging server exploited. If this is Google: smtp.google.com If it is Outlook.com : smtp.office365.com If it is Yahoo.fr: smtp.mail.yahoo.fr	(empty)
mail.password	Password for the mail account that will send email alerts	(empty)
mail.port	SMTP port to configure to enable electronic messages to be sent. If google.com, port:587 If outlook.com, port:25 If Yahoo.fr, port:465	25
mail.starttls	Security protocol for exchanges with messaging servers (false / true)	false
mail.test.sendto	Email address used to verify correct functioning of email transmission on application start-up	(empty)
mail.username	identifier for connecting to a mail box in order to send electronic alert messages relating to the utilisation of the *'NOTES*' widget	(empty)
print.fop.autoDetectFonts	Sets if FOP should auto detect fonts { true / false }	true
print.fop.configurationFile	FOP configuration file (commonly fop.xconf). Will use default configuration file if parameter value is set to *default*. Can be set to a file URI (eg *D:/conf/myfop.xconf*)	default

Name	Description	Default value
print.fop.initializeAtStartup	Initialize FOP when webapp starts { true / false }	false
print.fop.temporaryDirectory	FOP temporary files directory. If parameter value is set to *default* then system property java.io.tmpdir will be used. Example *F:/ myTempDir*	default
project.sample.installDemoProject	Installs the example project at startup. Set to false after the first deployment. (false/true)	false
project.sample.vectorDatabaseKind	Type of database (PostgreSQL, sqlserver, oracle, …) to define whether the example project contains, or not, a vector layer. At the time of writing, PostgreSQL only is supported.	PostgreSQL
security.crossDomain.activate	Activate sharing of *'Cross Origin*' resources (false / true	false
server.selfReferencingUrl	Determines the URL for servers behind a reverse proxy. This should be used when automated self-referencing is not possible. You will need to indicate the LOCAL URL to access Geoconcept Web (for example: http://localhost:8080/geoconcept-web.) Empty signifies undefined.	(empty)
services.activate.getAllLayers	Activate the GetAllLayers web service (false/true)	false
services.activate.getFeatures	Activate the GetFeaturesLayers web service (false/true)	false
services.client.here.XXX	WS HERE utilisation settings	
services.configuration.activateAdvanced	Enabling advanced settings for Super administrator(false / true)	false
services.counting.activate	Activate request counting (false / true)	true
services.geoapi.XXX	Settings for access to Geoconcpet Cloud services (GEOAPI)	
services.init.health.cache.duration	Number of milliseconds used to store health results (should be > 0 or -1 to disable it)	30000
services.init.parameter.geocoding.init	Allows you to load the world geocoding configuration file *geocoding-configuration.json* (“<TOMCAT_HOME>”\lib\) (false / true)	False
services.init.parameter.geocoding.removeExisting	Deletes, on start-up, the existing configuration for world geocoding (false / true)	false
services.init.parameter.routing.init	Allows you to load the vehicle profile configuration file *routing-configuration.json* (“<TOMCAT_HOME>”\lib\) (false / true)	False
services.init.parameter.routing.removeExisting	Deletes, on start-up, the existing vehicle profile configuration (false / true)	false inii.licence
services.protectWithKey	Activate the protection of web services with a key (false / true)	false
services.soap.activate	Enables utilisation of SOAP web services (false / true)	true
services.soap.security.activate	Allows you to activate securities for the utilisation of SOAP web services (false / true)	false

Name	Description	Default value
services.soap.security.wsse_delay	Time in milliseconds for a WSSE authentication to be taken into account (WS Soap security). Duration during which the authentication is valid (default 5 minutes)	300000
services.soap.security.wsse_delay_activate	Activates or not additional security via delayActivate (false/true)	false
services.wms.abstract	Extract from the WMS service (false / true)	true
services.wms.activate	Enables activation of WMS services (false / true)	true
services.wms.keywords	Key words (false / true)	(empty)
services.wms.title	Name of the WMS service	Geoconcept Web - Web Map Service
services.wmts.activate	Enables activation of WMTS services (false / true)	true
services.wmts.title	Name of the WMTS service	Geoconcept Web - Web Map Tile Service

These parameters are not fixed: new ones can be created automatically as and when needed for the utilisation of the functionalities described (Web services, …).

Tools

Geocoding definitions

This enables configuration of geocoding for several countries, via different UGC functions and/or via the HERE web service. The choice of country is made via the countryCode parameter, cf. Geocoding service.

- Name: name by which the country is called (for example, France). the default value must be added if at least one country is listed, this determines the country used if the countryCode parameter is empty, or if it is not found under Name and Possible Names.
- Possible Names: country call alias separated by | (ex: FR|FRA). Not to be filled in if the Name parameter has default as value.
- provider UGC or HERE. The different parameters for access and utilisation of the HERE web service are to be filled in under Administration / Parameters / geocoder / here.
- Datasource: name of the UGC datasource (for example, Loire-Atlantique). Leave empty for HERE.

This function can also be used for using separate repositories within a single country (towns, public amenities, …)

Graph definitions

Allows you to configure graphs for several countries and/or several vehicle profiles, via different SITI files.

- Name: Name of the configuration, this is used by the Routing widget.
- Description: Description of the configuration.

- Image: to select in the list. Geoconcept Web has, by default, several images that will vary according to the different vehicle profiles being used: they will have a prefix of “Transport_”.
- Provider: At the current time, SITI is the only provider available.
- Graph name: Name of the graph to use, for example: “Graphe_France_2014.siti”. The graphs or networks must be stored in the filepath defined by the “GraphsDirectory” variable in the *server.xml* file. For more details, consult the chapter entitled Configuration SmartRouting JEE.
- Type of profile: By default, the road networks and graphs designed and set up by GEOCONCEPT utilise the following values for profiles:
  - Automobiles (default value if value not assigned) = car
  - Bus = bus or coach
  - Taxis = taxi
  - Carpool = car share
  - Pedestrians = pedestrian
  - Trucks = truck or HGV, …
  - Deliveries = Delivery vehicles (van, truck, small lorry, …)
  - EmergencyVehicles = Emergency vehicles

Editing the server.xml file

In the case of a manual installation, it will be necessary to indicate to the application server where the SmartRouting JEE application can be found. Using a text editor, edit the *server.xml* file present in the directory: “<TOMCAT_HOME>”\conf\,

In the GlobalNamingResources tag, add the following lines:

```
<!-- SMARTROUTING -->
        <Resource
                ConnectionMode="LocalDll"
                name="geoconcept/smartrouting/default"
                RootDirectory="``<SMARTROUTING_HOME>''\server\SRJEE\smartrouting"
                auth="Container"
                type="com.geoconcept.smartrouting.connect.tomcat.ConnectionFactory"
                factory="com.geoconcept.smartrouting.connect.tomcat.ConnectionFactory"
                scope="Shareable"
                description="SmartRouting connection factory - local dll"
/>
```

The character string **SMARTROUTING_HOME** must be replaced by the file path for the directory containing your SmartRouting Server application.

As an option, it is also possible to add the filepath to a directory storing the reference tables:

```
GraphsDirectory="D:\Data\graphs"
```

- Type of profile:

Passwords

This section allows the super administrator to choose the level of strength required for user passwords.

Password strength is not applied, by default, to accounts linked to the "Super Administrator" group. To change this behaviour, simply set the *authentification.changePassword.excludeSuperAdmin* parameter to false (cf. parameters section), so that these accounts are obliged to change their password regularly (if the option is activated) in the same way as for any other user.

When performing a migration from an earlier version to version 5.2 of Geoconcept Web, or a later version, users for whom the passwords do not match the strength criteria will be returned to a form requesting they change the passwords concerned. To maintain the old mechanism (without verification of robustness), even if this is not recommended, it may be disabled by unchecking "Activate password strength handling".

Good practice measures to ensure password security correspond to the values defined by default in the table below. They can be strengthened or reduced according to the security policy applied.

Option	By default	Parameter
Change password regularly	Yes	60 days
Force the change of password at the first login	Yes	
Activate password strength handling	Yes	
Force the presence of an integer	Yes	
Force the presence of a lower case character	Yes	
Force the presence of an upper case character	Yes	
Force the presence of a special character (%,$, …)	No	
Authorise the presence of spaces	No	
Minimum number of characters for the password	8	

Messages

Allows handling of information messages displayed on the home page.

Processes

The *'List of processes*' function permits real time tracking of one or several cache generation processes, as these are being executed.

It enables consultation, for example, of all programmed cache calculations:

- the Process Identifier,
- the Type;
- the Terminated status for each process. This status is signaled by a cross "X",
- the Result,
- the Progress status for the process, expressed as a percentage,

- the Execution time that has run since the start of the process,
- the Time remaining for each process in the course of execution,
- the number of Errors encountered since the process was run.

Jobs

List of planned cache generation tasks for tiled layers.

Services

Allows you to activate the following protocols:

- Protection with an application key: provides, for all REST and SOAP services, two parameters (app_id with the application identifier, and token with the key of an identifier) to place in the header of queries sent to the web services.

For API Javascript, the identification information needs to be supplied in the following way:

```
GCUI.Settings = {app_id:"REPLACE_WITH_YOUR_APP_ID", token:"REPLACE_WITH_YOUR_TOKEN"};
```

- SOAP,
- WMS
- WMTS.

Counting

Monthly usage statistics for the various web services.

The Download button allows you to retrieve statistics in a .xls format file.

License

This allows you to reload a license file or to manually update it as a function of new user rights authorised by Geoconcept.

Information

This allows you to provide information about:

- the server operating system,
- the parameters used,
- the correct functioning of GCIS,
- the parameters of the JVM;
- the memory,
- tracking of threads in the stack,
- the datasource;
- parameters used for geocoding;

- access to the geocoder,
- web services testing.

Documentation

Links to the different chapters of the online documentation of Geoconcept Web.

Appendices

Differences between versions of Geoconcept Web

This section aims to show the functional differences between the different versions of Geoconcept Web.

Once the 2021 Geoconcept Web version is released, the Starter, Standard and Enterprise versions will disappear and will be replaced by a single version that includes the full complement of functionalities.

The Web Services listed below are available as optional extras: please contact us to find out how to order them.

- Pickup and Delivery
- Optimization (simplified version)
- Optimization (full version)

Generating geocoding repositories

Geocoding repositories are made up of a group of files with .ugc.mdi file extensions. The entry point for selecting a repository is the file with a ugc.mdi extension, but it is vital that all .ugc.xxi files making up the repository are present in the same directory, and that they have the same name (before the file extension).

In Geoconcept Web 2021 and later versions, a new file format is used for geocoding. Geocoding files created in the former file formats are no longer compatible.

To build the reference tables used by the geocoder, you will need to submit a request by sending an email to adv@geoconcept.com [mailto:adv@geoconcept.com]: a serial number will be returned to you that will allow you to update Universal Geocoder via the Licence activation menu in Geoconcept 2021 and later versions. When using an earlier version of Geoconcept Web and Geoconcept, specify this in your message.

Basic principles

The construction of a referencial geocoding takes place in two separate steps from the Geoconcept GIS application:

- In the first instance, three text files are generated, CITIES.txt, STREETS.txt and LINKS.txt using the Generate reference files button;
- Then, from the files generated in the first step, the Generate reference table button compiles the associated referencial geocoding (.ugc.xxi) so it is ready to be used for your geocoding operations.

UGC Builder pane

File generation

To generate the CITIES.txt, STREETS.txt and LINKS.Ttxt files, the command to use in Geoconcept is Generate reference files in the Data/Geocoder menu and the UGC Builder pane.

Preparing the cartographic framework

The reference table is the hingepin of the geocoding system. It is constructed on a geographic database, and is its mirror. The more exhaustive the geographic base, the more dense and complete is the reference table, and the more efficient is the geocoding, with high rates of success.

The map integrating all the cartographic data necessary to the constitution of geocoding files must be constructed. It is essential that it contains all the postal data needed to obtain good geocoding results. The data to geocode must fulfil the needs of the geocoding operation.

The main encompassing, or *encircling* entities for the map (often in France these are town objects) must have a zone code (in France this will often be the postcode).

> It is impossible to geocode addresses on street number using a reference table generated from a geographic database with streets that are not numbered and that do not have exhaustive data in a dense urban milieu. The geocoding engine can only work with the data it is supplied with, so if problems occur, the first thing to examine is the cartographic data that has served to created the reference table.

Selecting encircling objects

The first step is to select level 1 objects, that is the encircling entities that are (in France anyway) generally speaking, towns or regions.

The Search command in the Data/Queries menu in Geoconcept serves to search and select encompassing entities on the map, for example, Administrative unit, Town.

Once the selection has been applied, it will then be possible to set the parameters for generating the text files.

Configuring the data

Select Generate reference files in the Data/Geocoder menu to set the parameters as required.

The configuration is made up of the three following steps.

Define the disk location for the files once they have been generated, as well as the associated filenames

Click on Browse, and then indicate the storage filepath for the two files to generate. Don’t forget to indicate the name to associate to the file generation, this name being most often that of the encircling entity selected (in France, this would be the town).

Files generated will have the specified name with a suffix as follows: _CITIES.txt, _STREETS.txt, _LINKS.txt and _METADATA.xml.

Configure the items necessary to supply the level 1 items

The term *level 1* qualifies the objects encircling those of level 2, the streets. Generally speaking, level 1 corresponds to the towns or localities.

Six fields, of which one is optional, must be defined:

- Class / Subclass: the Geoconcept field linked to the level 1 encircling entity. The Subclass is not compulsory;
- Name: the name of this entity that must appear in the reference table that serves to execute the geocoding operations. Generally speaking, the global Name field is used.

For HERE data, we would associate this for example to Administrative unit – Town.

- Unique key field: this field should allow characterisation in a general way of each of the level 1 objects. We therefore take, in the case of France, the INSEE code, that provides a unique identifier for each town;
- Post code field: this field also provides information about the map objects. In France, this corresponds to the Post Code. We can associate to this field any other field that can be used as a geocoding key, since it represents a postal data item. But we could also associate to it a field that could serve as a discriminator (or condition) to permit distinction between two entities of the same name (for example: the number of the Department in France).
- Attribute field: this optional field supplies additional information about level 1 objects.

> It is vital that the Unique key field contains a unique identifier for each level 1 object.
>
> If, in the map, the INSEE code (if we are working on France for example) is not present, a Counter field can be created to serve as unique key on the objects. Sometimes it can be simpler to just use the Geoconcept identifier.

Configure the items necessary to supply the level 1 items

These level 2 objects are included in the group represented by those at level 1. Generally speaking, these level 2 objects correspond to the road network, which is a line type structure.

Seven items, one of which is optional, must be defined:

- Class / Subclass: the Geoconcept Class linked to the level 2 entity. Usually, this will be a Road network Class. The Subclass is not compulsory;
- Attribute: this field is optional, and provides additional information about level 2 objects. It can, for example, be linked to the IRIS code or the *Street block* code associated to streets;

> This Attribute field associated to streets can sometimes be useful. Above all, it is of interest when retrieved at the end of a geocoding operation, for example to retrieve IRIS codes.

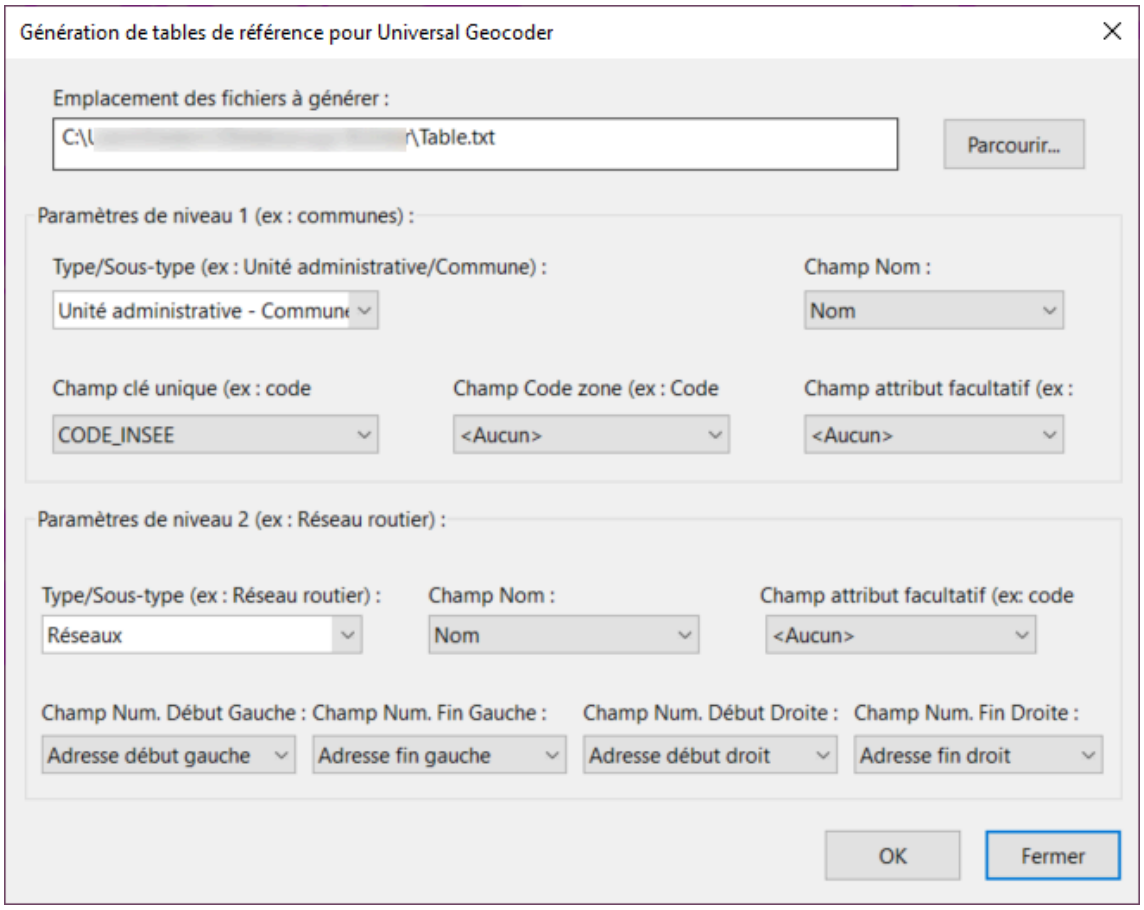
- Name: the name of the street that must appear in the reference table and that serves to perform geocoding operations. Usually, we use the Name global field;

> It is vital for streets that the name contains the complete label, that is, both the type of street (for example: street) and the street name (for example: Monge).

Four fields are linked to the street numbers:

- Num End Left: the last number on the street section, even or odd, taking into account the street number;
- Num Start Left: the first number on the street section, even or odd, taking into account the street number;
- Num End Right: the last number on the street section, even or odd, taking into account the street number;
- Num Start Right: the first number on the street section, even or odd, taking into account the street number.

A typical configuration



Generating files by administrative entity

If the user wishes to create a reference table that only contains encircling polygons (French towns, for example), the user should not fill in any information for level 3 objects. The STREETS.txt file will therefore remain empty.

When the CITIES.txt and STREETS.txt text files are generated, it will suffice not to have assigned any parameters for the level 2 elements. The STREETS.txt file generated will therefore be empty.

> The objects designated as encircling objects to geocode can just as well be polygon type objects as points.

Generating files with a reference point and not a line

When generating a reference table using point addresses, follow the identical procedure as that described above for generating the files, indicating the same field for the four street number fields.

Description of the CITIES.txt file

The first text file (CITIES.txt) contains all the information necessary to all localities concerned (encircling objects) for the geographic space to which the geocoding is to be applied.

The file contains five columns, that must remain in the prescribed order:

- Town name: contains the name of the town or locality containing the address;
- Area code: code characterising the locality (in France this would be the post code for the town);
- Unique key: key describing each town in a unique way (in France, this would be the INSEE code for the town);
- Attribute: any code that serves to provide additional information;
- X in WGS 84;
- Y in WGS 84.

> The X and Y coordinates represent the centroid of the town in the case of a polygon object or its coordinates if it is a point object. They are expressed in the WGS 84 projection system.

In the event that there might exist different names that could characterise the polygon entity (notably to handle a bilingual scenario) it is possible to store all these names in the reference table. The Town name field must be filled with all possible names, concatenated using the @ character.

For example, for the polygon entity Paris, the town name Paris@Parigi. This new town name must appear both in the CITIES.txt file, in the STREETS.txt file, and if necessary in the LINKS.txt file.

Description of the STREETS.txt file

The second text file (STREETS.txt) contains all the information indispensable to all the streets in the geographic space to which the geocoding operation is to be applied.

The file must contain nine columns, in a particular order:

- Street name: contains the road section name;
- Street attribute: any code that serves as an additional attribute (for example: the identifier for the street section, the IRIS code);
- Num End Left: the last number in the street section, even or odd, taking into account the street number;
- Num Start Left: the first number on the street section, even or odd, taking into account the street number;
- Num End Right: the last number on the street section, even or odd, taking into account the street number;
- Num Start Right: the first number on the street section, even or odd, taking into account the street number;
- Town name: contains the name of the town or locality containing the address;
- Town attribute: any code that serves as additional information on the encircling entity;
- Unique key for the town: key describing the town in a unique way (in France, this would be the INSEE code for the town).

There follows a series of columns, without names, characterising the geometry of the street:

- X1 : the start abscissa for the street section;
- Y1 : the start ordinate for the street section;
- X2 : the end abscissa for the street section;
- Y2 : the end ordinate for the street section;
- the number of intermediate points making up the street section;
- a series of pairs of coordinates that express, for each column, the delta X and delta Y for each intermediate point.

> It is vital to verify in the two text files, the pairs entitled Name of the encircling entity and Associated Unique key. These should be identical.

In the case of a geocoding operation from a reference point, the geometry associated to each section is of the type: X1 Y1 X1 Y1 0. In effect, as the street section is represented by a point, only the coordinates of this point are recorded.

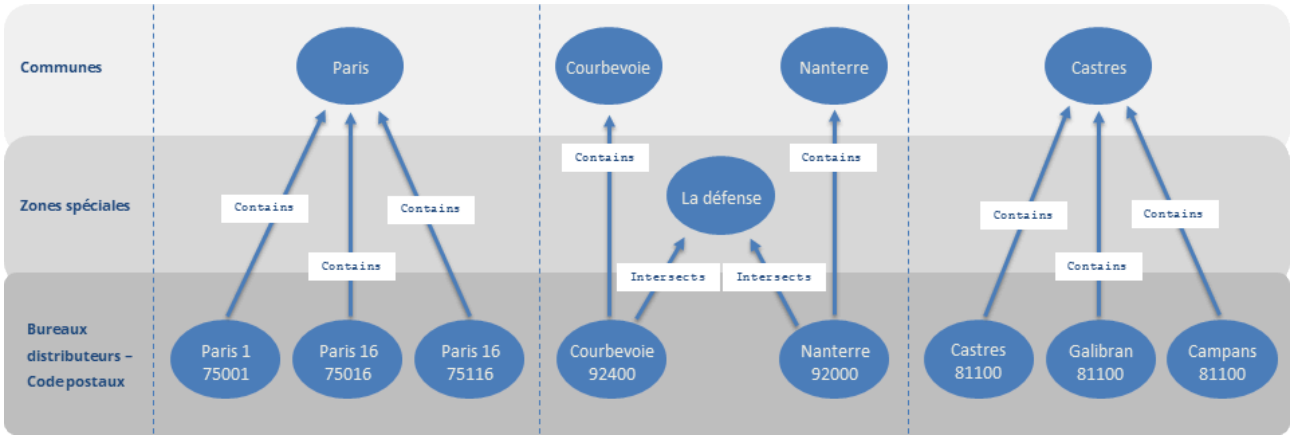
LINKS.txt file

This file allowing you to generate hierarchies, is required, and is supplied empty, except for the header titles in 3 columns

- Parent;
- Parent;
- Class.

The file of level 1 hierarchies (optional), that enables creation of hierarchical links between administrative polygon entities. This facilitates the address search function. This functionality is reserved for users with a high level of competence in the field of geocoding.

Example of a possible set of hierarchies



The text file takes the following form (example of Paris and its districts):

Parent	Child	Type	Parent name	Child name	Child postcode
4981324_City	4981324	Contains	PARIS	1st ARRONDISSEMENT	75001
4981324_City	4981286	Contains	PARIS	10th ARRONDISSEMENT	75010
4981324_City	4981290	Contains	PARIS	11th ARRONDISSEMENT	75011
4981324_City	4981294	Contains	PARIS	12th ARRONDISSEMENT	75012
4981324_City	4981298	Contains	PARIS	13th ARRONDISSEMENT	75013
4981324_City	4981302	Contains	PARIS	14th ARRONDISSEMENT	75014
4981324_City	4981306	Contains	PARIS	15th ARRONDISSEMENT	75015
4981324_City	4981312	Contains	PARIS	16th ARRONDISSEMENT	75116
4981324_City	4981310	Contains	PARIS	16th ARRONDISSEMENT	75016
4981324_City	4981314	Contains	PARIS	17th ARRONDISSEMENT	75017
4981324_City	4981316	Contains	PARIS	18th ARRONDISSEMENT	75018

4981324_City	4981318	Contains	PARIS	19th ARRONDISSEMENT	75019
4981324_City	4981332	Contains	PARIS	2nd ARRONDISSEMENT	75002
4981324_City	4981326	Contains	PARIS	20th ARRONDISSEMENT	75020
4981324_City	4981338	Contains	PARIS	3rd ARRONDISSEMENT	75003
4981324_City	4981344	Contains	PARIS	4th ARRONDISSEMENT	75004
4981324_City	4981350	Contains	PARIS	5th ARRONDISSEMENT	75005
4981324_City	4981356	Contains	PARIS	6th ARRONDISSEMENT	75006
4981324_City	4981362	Contains	PARIS	7th ARRONDISSEMENT	75007
4981324_City	4981368	Contains	PARIS	8th ARRONDISSEMENT	75008
4981324_City	4981374	Contains	PARIS	9th ARRONDISSEMENT	75009

Where:

- Parent: Identifier of the parent entity (ex Paris) located in the file CITIES.txt;
- Child: Identifier of the child entity (Ex: an *arrondissement* or district for Paris) located in the CITIES.txt file;
- Type: types of link (contains, intersects);
- • Parent name (optional): name of parent entity;
- • Child name (optional): name of child entity;
- • Child postcode (optional): post code of the child entity.

METADATA.xml file

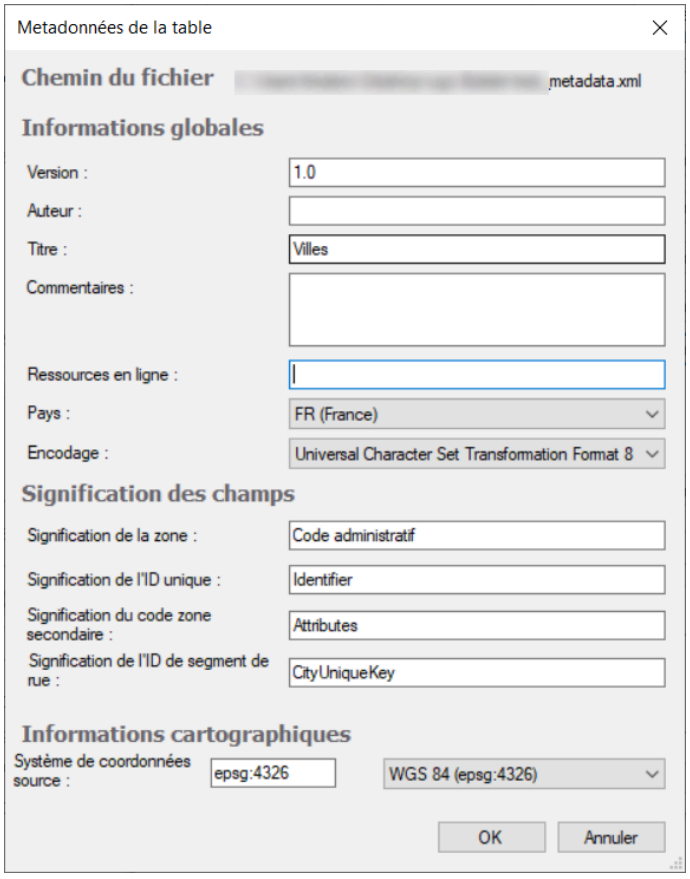
The metadata file is required, and does not normally require editing, however if necessary the user can adapt it using the *Edit* button in the Reference table generation window (cf. the next paragraph).

The following information items can be edited via the editing interface:

- Filepath;
- Version;
- Author;
- Title;
- Comment;

- On-line resources;
- Country;
- Coding;
- Description of the zone entity: defines what the reference zone (for example, the post code) corresponds to;
- Description of the Unique ID entity: defines what the unique identifier in the table corresponds to;
- Description of the secondary area code: defines what the (secondary) reference zone corresponds to (the INSEE code, for example);
- Description of the road segment ID;
- Source coordinates system;
- Output coordinates system.

Interface for editing metadata



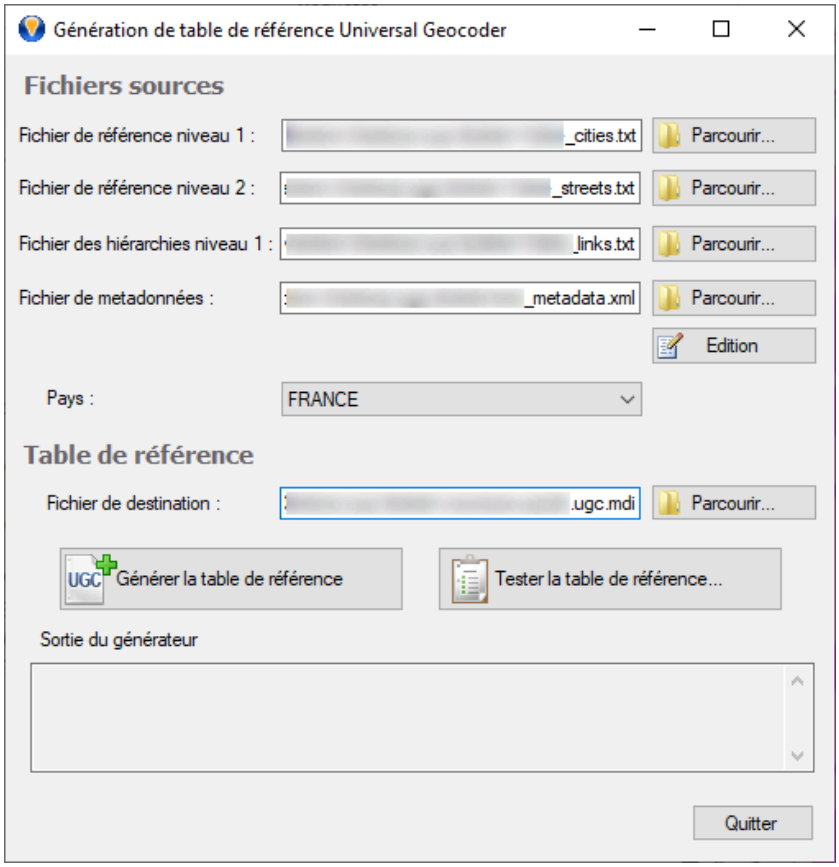
Generating the geocoding repository

The last step is to generate the files making up the geocoding repository with .ugc.xxi file extensions, to calculate the X and Y coordinates and associate them to addresses, from generated files containing the relevant geographic and identifier information.

The Generate a reference table module is available in Geoconcept's Data/UGC Builder Pane menu option.

Generate reference table menu

UGC Builder interface



In this dialogue the user defines the text files from which the table will be created:

- the level 1 file (CITIES.txt) contains information encircling level 2 information (in France, this will be the towns);
- the level 2 file (STREETS.txt) contains information concerning all roads and thoroughfares, supporting the address information.
- the hierarchies file (LINKS.txt) contains information about relationships between polygon entities;
- the metadata file (METADATA.xml) contains information used to generate the table.

Before generating the repository, you will need to specify the destination file, by indicating the filepath and .ugc.mdi filename before validating.

The *Generate reference table* button allows you to create a reference table that incorporates the parameters entered previously.

The integrity of the reference file generated can also be verified using the *Test reference table* button.

The user must define the reference language used by the grammar file.

- Disk location of the table to verify;
- Disk location of the associated grammar file;
- Generate statistics and/or Geocode the table by checking the appropriate options.

This last option enables detection of any inconsistencies in geocoding each of the present addresses.

- Disk location of the journal file containing the result of the verification.

Generating a table of administrative entities

Once the files have been created, the procedure to follow requires definition of:

- • the filepath to the file CITIES.txt containing the encircling entities or localities (in France, these would be towns);
- for the level 2 file, the filepath to the empty file generated called STREETS.txt;
- the hierarchies file (LINKS.txt);
- the metadata file (METADATA.xml).

A reference table with only level 1 entities is then created.

Generating autocomplete files

The autocomplete function is activated via the Geocoder or Routing widgets, and when enabled, suggests a series of close-matching results to aid the user as input takes place.

To use the autocomplete function, certain files are necessary. The files concerning postal addresses in France are supplied by the company GEOCONCEPT.

It is also possible to generate your own autocomplete files using the data stored in your Geoconcept maps.

For settings, see the next chapter.

Files required

The files needed to generate the autocomplete text options are the following, located in the “<GEOCONCEPT_WEB_HOME>”/ugc/autocompletion/ directory:

- abbreviations.reference.txt
- autocomplete.xml
- build.bat
- table_cities.txt
- table_streets.txt

You will need to move these files into the UGC Command line directory: “<GEOCONCEPT_WEB_HOME>”/ugc/cmdline/win64-amd64

> The table_cities.txt and table_streets.txt files are the example files for towns in the Loire Atlantique department in France. You should replace them with your own files. To generate these, refer to the documentation: Generate geocoding files

Steps in generating these files

- Replacing the table_cities.txt and table_streets.txt files with your own files
- Editing the autocomplete.xml file
  - Editing the general information content
  - Checking the names of cities and streets files
  - Indicate the number of classes (class-number = maximum 8 classes).

> The classes represent the order of priority in which the results will be displayed in the autocompletion list. It is possible to add 8 classes. You should first add a column manually entitled WEIGHT in the table_cities.txt file. Next, for each line, you should indicate the desired order.

- Edit the build.bat file, and check the positioning of the autocomplete.xml file.
- Execute build.bat by double-clicking on the file. Once the command has been executed, a series of new files is created in the work directory (address and city).
- Copy the newly created files, as well as autocomplete.xml and abreviations.reference.txt, into the “<GEOCONCEPT_WEB_HOME>”/data/maps/autocomp/Auto_completion/ directory

Example of graphic design style

In Geoconcept Web, a number of pre-saved example styles are provided so the user can choose a style for their mapping portal easily and quickly, and then try it out to ensure it works. As explained in the “Skins section” the user can create their own graphic style by copying and pasting the elements they require from a CSS style sheet. Below is an example of a style sheet with some indications about the

role of each of the parameters that can be adjusted. The user will then be free to change the values for colours they want to use depending on the desired appearance for their site.

```
#hd{
   /* default background colour, for all layout engines that don't implement gradients */
   background: #FF6501;

  /* gecko based browsers */
  background: -moz-linear-gradient(left, #FF6501, #FFFFFF);

  /* webkit based browsers */
  background: -webkit-linear-gradient( left, #FF6501, #FFFFFF);
}

.panel {
        border: solid 1px #666666;
        margin-right:9px;
        background-color:#FFFFFF;
}

/** header panel **/
.yui3-skin-sam.gcweb.gcui-skin .yui3-panel .yui3-widget-hd {
        background:none;
        background-color:#FF6501;
        color: #FDFEFF;
}

/** footer panel **/
.yui3-skin-sam .yui3-panel .yui3-widget-ft {
        background:none!important;
        background-color:#D35401 !important;
}

/******* RESPONSIVE MENU ***/
.gcweb .menu-button {
    background-color: #D35401;
}

.gcweb .menu-button .fa {
    color: #FDFEFF;
}

.gcweb .menu-link {
    border-right-color: #D35401;
}

.gcweb .menu-link .ui.list .item:active div {
    color: #FDFEFF;
    background-color: #FF6501;
}

.gcweb .menu-link .ui.list .item:active {
    background-color: #FF6501;
}

/******* WIDGET BUTTON PUSH ***/
.gcweb-widget-image {
        background-color:#D35401;
}

.ui.button.gcweb-widget {
    background-color: #D35401;
}
```

```
.ui.button.gcweb-widget.activated {
background-color: #9B3C01;
}

/** toolbar img **/

.gcweb-library-widget-icon {
        background-color:#D35401;
}
.activated,
.ui.image.gcweb-widget-image.mobile {
        background-color:#D35401;
}

#logo{
        height: 49px;
        width: 100%;
        margin-top:10px;
        float:left;
}

.logoPortal {
        background: url(../../../Image/showImage.do?name=logo_blanc) no-repeat scroll left top transparent;
}

.loading-panel-logo {
    color: #FFFFFF;
}

#loading_portal {
    background-color: #D35401;
}

/** Layer switcher **/
.layerSwitcherA {
        background-color:#FF6501;
}

.layerSwitcherTextA {
        color:#9acae1;
}

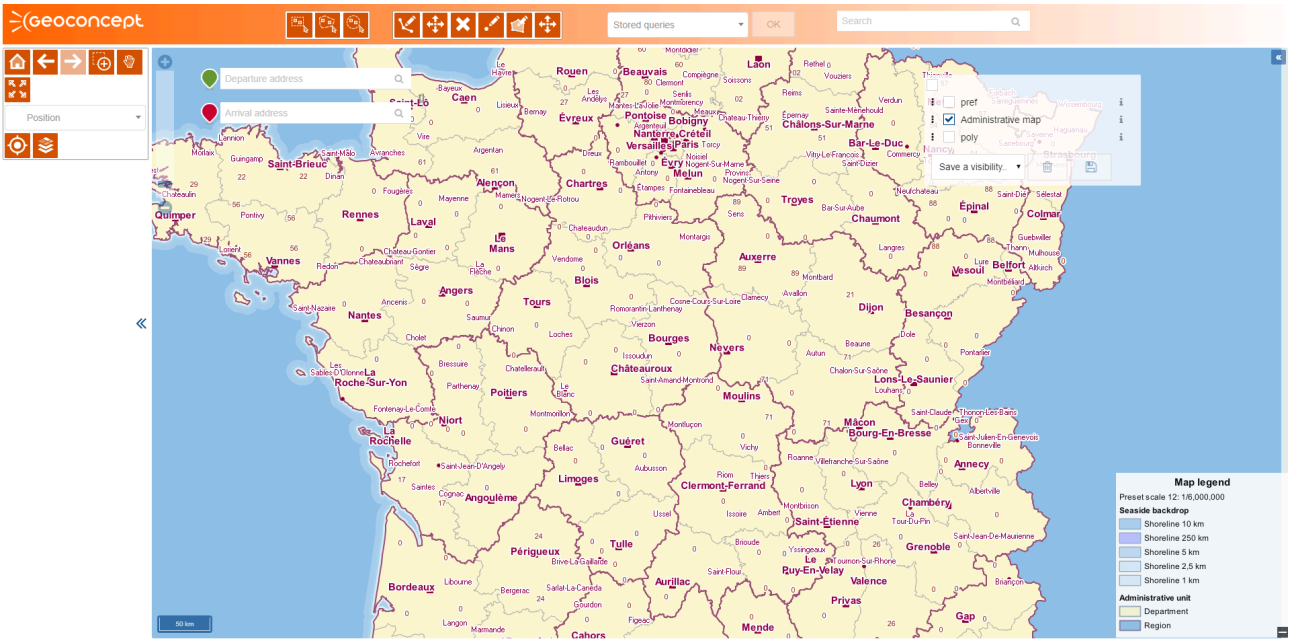
.layerSwitcherB {
        background-color:#D35401;
}

.layerSwitcherTextB {
        color:#3399CC;
}

.copyright {
    background: #D35401;
}

/******* WIDGET REPORT LIBRARY ***/
.yui3-treeview .yui3-treeview-treelabel.selected-leaf,
.yui3-treeview .yui3-widget.yui3-treeleaf.selected-leaf {
        background: none repeat scroll 0 0 #3399CC;
    color: #FFFFFF;
}
```

Example of a Geoconcept Web portal exploiting the example style sheet



Customise the Home page

If you want to customise your Geoconcept Web portal Home page to include your own logo, you will need to follow these steps:

- load the logo for your company or your organisation into the ***'Images***' section,
- copy-paste the few lines of code shown below to the start of your CSS style sheet available in the ***'Skins***' section, replacing "logo_bleu" with the name of your image:

```
.loginBackground {
     background: url("../Image/showImage.do?name=logo_bleu") no-repeat scroll center 10%;
}
```

- finally, make sure that the style sheet created has been defined as being the ***'default skin***'.

Other useful tips

Loading page colour

Change the colour of the loading page before displaying the portal.

```
#loading_portal {
        background-color: #8CACC9;
}
```

Circular widgets

In order to replace the standard display of widgets with round buttons

```
.ui.button.gcweb-widget {
        background-color: #8CACC9;
        border-radius: 25px;
        padding: 0.3em 0.4em 0.3em 0.4em;
}
```

Reduce the OK button size

Reduce the size of the OK button in the query widget.

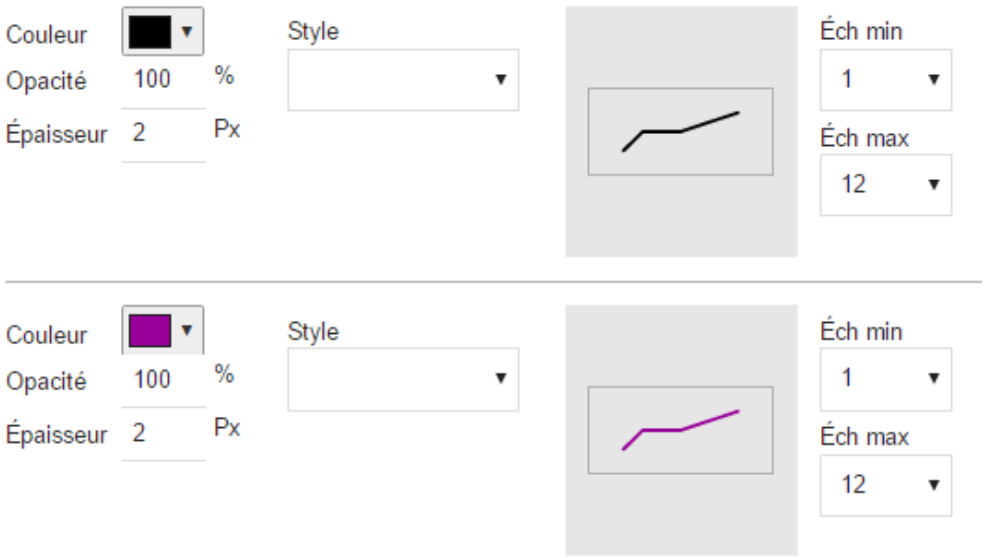
```
.ui.button.storedQuery-btn {
    margin-left: 0.3em;
    padding-left: 0.7em;
    padding: 0.7em 0.7em 0.7em;
}
```

Example of an SLD style

SLD (Styled Layer Descriptor) format is an OGC (Open Geospatial Consortium) standard ideal for describing the style of map layers. Below are a few examples of its implementation for Geoconcept Web vector layers. To find out more about this standard consult http://www.opengeospatial.org/standards/sld

To enable display of objects as a function of the value of a field, as in the examples that follow, it is necessary to activate them in the definition of the fields of the vector layers, by clicking on Show.

Example 1: display of a line as a function of the value of a field

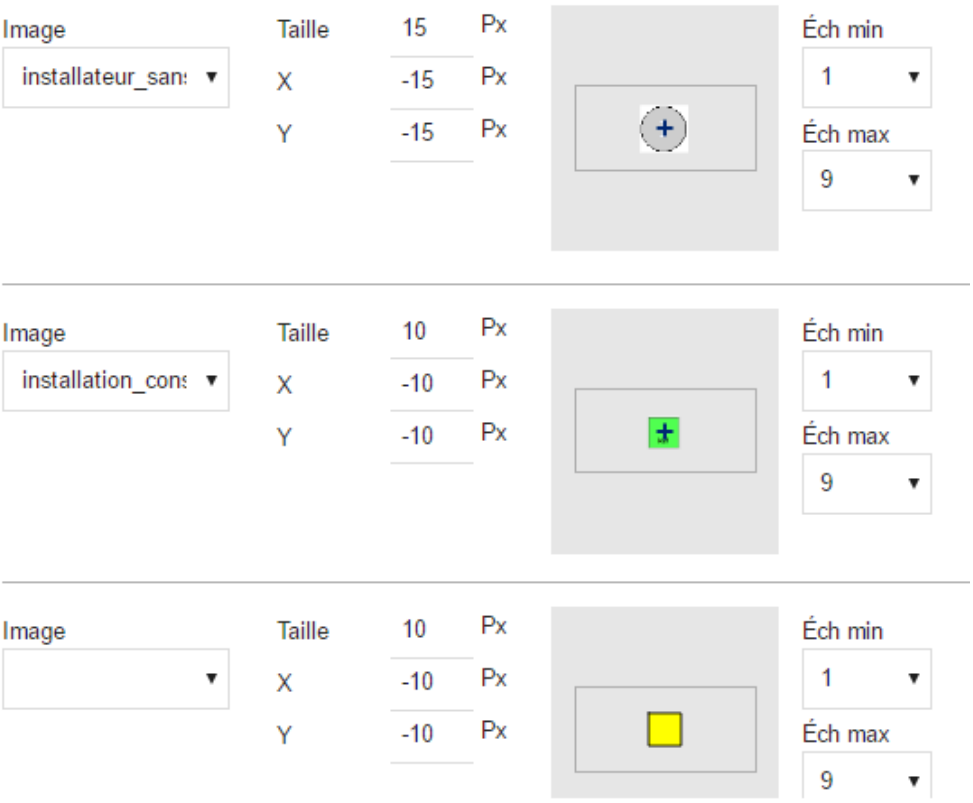


The "societe" field has a value of "CVG" or "CICG".

```
<sld:StyledLayerDescriptor xmlns:sld="http://www.opengis.net/sld" version="1.0.0" xmlns:xsi="http://
www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.opengis.net/sld http://
```

```
schemas.opengis.net/sld/1.0.0/StyledLayerDescriptor.xsd" xmlns:ogc="http://www.opengis.net/ogc"
 xmlns:gml="http://www.opengis.net/gml">
        <sld:NamedLayer>
                <sld:Name/>
                <sld:UserStyle>
                        <sld:Name>Style</sld:Name>
                        <sld:IsDefault>1</sld:IsDefault>
                        <sld:FeatureTypeStyle>
                                <sld:Rule>
                                        <ogc:Filter>
                                                <ogc:PropertyIsEqualTo>
                                                        <ogc:PropertyName>societe</ogc:PropertyName>
                                                        <ogc:Literal>CVG</ogc:Literal>
                                                </ogc:PropertyIsEqualTo>
                                        </ogc:Filter>
                                        <sld:MinScaleDenominator>1</sld:MinScaleDenominator>
                                        <sld:MaxScaleDenominator>12</sld:MaxScaleDenominator>
                                        <sld:LineSymbolizer>
                                                <sld:Stroke>
                                                        <sld:CssParameter name="stroke">#000000</
sld:CssParameter>
                                                        <sld:CssParameter name="stroke-opacity">1</
sld:CssParameter>
                                                        <sld:CssParameter name="stroke-width">2</
sld:CssParameter>
                                                        <sld:CssParameter name="stroke-linecap">round</
sld:CssParameter>
                                                </sld:Stroke>
                                        </sld:LineSymbolizer>
                                </sld:Rule>
                                <sld:Rule>
                                        <ogc:Filter>
                                                <ogc:PropertyIsEqualTo>
                                                        <ogc:PropertyName>societe</ogc:PropertyName>
                                                        <ogc:Literal>CICG</ogc:Literal>
                                                </ogc:PropertyIsEqualTo>
                                        </ogc:Filter>
                                        <sld:MinScaleDenominator>1</sld:MinScaleDenominator>
                                        <sld:MaxScaleDenominator>12</sld:MaxScaleDenominator>
                                        <sld:LineSymbolizer>
                                                <sld:Stroke>
                                                        <sld:CssParameter name="stroke">#990099</
sld:CssParameter>
                                                        <sld:CssParameter name="stroke-opacity">1</
sld:CssParameter>
                                                        <sld:CssParameter name="stroke-width">2</
sld:CssParameter>
                                                        <sld:CssParameter name="stroke-linecap">round</
sld:CssParameter>
                                                </sld:Stroke>
                                        </sld:LineSymbolizer>
                                </sld:Rule>
                        </sld:FeatureTypeStyle>
                </sld:UserStyle>
        </sld:NamedLayer>
</sld:StyledLayerDescriptor>
```

Example 2: display of a point as a function of the value of a field

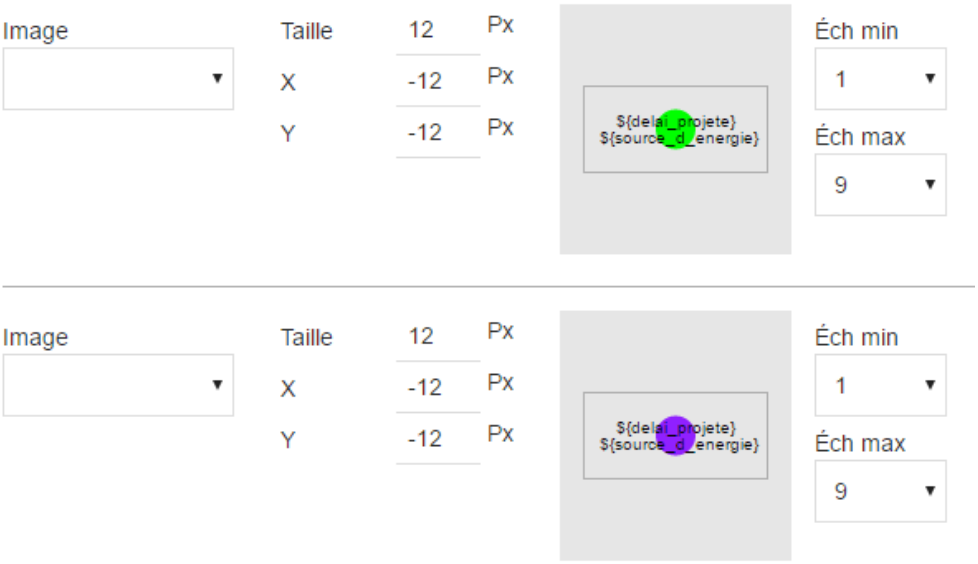


The "genre_de_client" field has a value of "", "Consommateur" or "En attente".

```
<sld:StyledLayerDescriptor xmlns:sld="http://www.opengis.net/sld" version="1.0.0" xmlns:xsi="http://
www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.opengis.net/sld http://
schemas.opengis.net/sld/1.0.0/StyledLayerDescriptor.xsd" xmlns:ogc="http://www.opengis.net/ogc"
 xmlns:gml="http://www.opengis.net/gml">
       <sld:NamedLayer>
              <sld:Name/>
              <sld:UserStyle>
                     <sld:Name>Style</sld:Name>
                     <sld:IsDefault>1</sld:IsDefault>
                     <sld:FeatureTypeStyle>
                            <sld:Rule>
                                   <ogc:Filter xmlns:ogc="http://www.opengis.net/ogc">
                                          <ogc:PropertyIsEqualTo>
                                                 <ogc:PropertyName>genre_de_client</ogc:PropertyName>
                                                 <ogc:Literal/>
                                          </ogc:PropertyIsEqualTo>
                                   </ogc:Filter>
                                   <sld:MinScaleDenominator>1</sld:MinScaleDenominator>
                                   <sld:MaxScaleDenominator>9</sld:MaxScaleDenominator>
                                   <sld:PointSymbolizer>
                                          <sld:Graphic>
                                                 <sld:ExternalGraphic>
                                                        <sld:OnlineResource xmlns:xlink="http://
www.w3.org/1999/xlink" xlink:type="simple" xlink:href="/geoconcept-web/Image/showImage.do?id=290"/>
                                                        <sld:Format>image/png</sld:Format>
                                                        <sld:GraphicXOffset>-15</sld:GraphicXOffset>
                                                        <sld:GraphicYOffset>-15</sld:GraphicYOffset>
                                                 </sld:ExternalGraphic>
```

```
                                                <sld:Opacity>1</sld:Opacity>
                                                <sld:Size>30</sld:Size>
                                        </sld:Graphic>
                                </sld:PointSymbolizer>
                        </sld:Rule>
                        <sld:Rule>
                                <ogc:Filter xmlns:ogc="http://www.opengis.net/ogc">
                                        <ogc:PropertyIsEqualTo>
                                                <ogc:PropertyName>genre_de_client</ogc:PropertyName>
                                                <ogc:Literal>Consommateur</ogc:Literal>
                                        </ogc:PropertyIsEqualTo>
                                </ogc:Filter>
                                <sld:MinScaleDenominator>1</sld:MinScaleDenominator>
                                <sld:MaxScaleDenominator>9</sld:MaxScaleDenominator>
                                <sld:PointSymbolizer>
                                        <sld:Graphic>
                                                <sld:ExternalGraphic>
                                                        <sld:OnlineResource xmlns:xlink="http://
www.w3.org/1999/xlink" xlink:type="simple" xlink:href="/geoconcept-web/Image/showImage.do?id=289"/>
                                                        <sld:Format>image/png</sld:Format>
                                                        <sld:GraphicXOffset>-10</sld:GraphicXOffset>
                                                        <sld:GraphicYOffset>-10</sld:GraphicYOffset>
                                                </sld:ExternalGraphic>
                                                <sld:Opacity>1</sld:Opacity>
                                                <sld:Size>20</sld:Size>
                                        </sld:Graphic>
                                </sld:PointSymbolizer>
                        </sld:Rule>
                        <sld:Rule>
                                <ogc:Filter xmlns:ogc="http://www.opengis.net/ogc">
                                        <ogc:PropertyIsEqualTo>
                                                <ogc:PropertyName>genre_de_client</ogc:PropertyName>
                                                <ogc:Literal>En attente</ogc:Literal>
                                        </ogc:PropertyIsEqualTo>
                                </ogc:Filter>
                                <sld:MinScaleDenominator>1</sld:MinScaleDenominator>
                                <sld:MaxScaleDenominator>9</sld:MaxScaleDenominator>
                                <sld:PointSymbolizer>
                                        <sld:Graphic>
                                                <sld:Mark>
                                                        <sld:WellKnownName>square</
sld:WellKnownName>
                                                        <sld:Fill>
                                                                <sld:CssParameter
 name="fill">#FFFF00</sld:CssParameter>
                                                        </sld:Fill>
                                                        <sld:Stroke>
                                                                <sld:CssParameter
 name="stroke">#000000</sld:CssParameter>
                                                                <sld:CssParameter name="stroke-
width">1</sld:CssParameter>
                                                        </sld:Stroke>
                                                </sld:Mark>
                                                <sld:Size>20</sld:Size>
                                        </sld:Graphic>
                                </sld:PointSymbolizer>
                        </sld:Rule>
                </sld:FeatureTypeStyle>
        </sld:UserStyle>
    </sld:NamedLayer>
</sld:StyledLayerDescriptor>
```

Example 3: display text sourced by fields on objects



The "statut" field has a value of "Vert" or "Violet". Text labels displayed are sourced by the "delai_projete" and "source_d_energie" fields.

```
<?xml version="1.0" encoding="UTF-8"?>
<sld:StyledLayerDescriptor xmlns:sld="http://www.opengis.net/sld" xmlns:gml="http://www.opengis.net/
gml" xmlns:ogc="http://www.opengis.net/ogc" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 version="1.0.0" xsi:schemaLocation="http://www.opengis.net/sld http://schemas.opengis.net/sld/1.0.0/
StyledLayerDescriptor.xsd">
        <sld:NamedLayer>
                <sld:Name>Note</sld:Name>
                <sld:UserStyle>
                        <sld:Name>Style</sld:Name>
                        <sld:IsDefault>1</sld:IsDefault>
                        <sld:FeatureTypeStyle>
                                <sld:Rule>
                                        <ogc:Filter>
                                                <ogc:PropertyIsEqualTo>
                                                        <ogc:PropertyName>statut</ogc:PropertyName>
                                                        <ogc:Literal>Vert</ogc:Literal>
                                                </ogc:PropertyIsEqualTo>
                                        </ogc:Filter>
                                        <sld:MinScaleDenominator>1</sld:MinScaleDenominator>
                                        <sld:MaxScaleDenominator>9</sld:MaxScaleDenominator>
                                        <sld:PointSymbolizer>
                                                <sld:Graphic>
                                                        <Mark>
                                                                <WellKnownName>circle</WellKnownName>
                                                                <Fill>
                                                                        <CssParameter name="fill">#00FF00</
CssParameter>
                                                                </Fill>
                                                        </Mark>
                                                        <Size>24</Size>
                                                </sld:Graphic>
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           ]]>
```

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          ]]>
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                        </sld:Rule>
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        </sld:UserStyle>
    </sld:NamedLayer>
</sld:StyledLayerDescriptor>
```

Apache HTTP Server

In the standard installation, for version 6.0 and later versions of Geoconcept Web, Apache Tomcat is used as the Web server, but it is possible nonetheless to use other web servers at the front end (Apache HTTP Server, IIS, …) to fulfil the needs of specific architectures.

Having first downloaded this web server, it will be necessary to install it following the steps suggested in the installer. By default, the installation port is port 80, but this can be modified by editing the httpd.conf file.

It is important to note the installation directory for the Apache server, noted here as: <APACHE_HOME>.

Configuration of ajp proxies to tomcat

To use Apache as a proxy to Tomcat (this enables, for example, deletion of the url port), decomment the lines corresponding to the mod_proxy and mod_proxy_ajp modules.

```
# load modules mod_proxy
LoadModule proxy_module modules/mod_proxy.so
LoadModule proxy_ajp_module modules/mod_proxy_ajp.so
```

Then configure the proxy, for example as follows (with geoconcept-web, the name of the .WAR deployed in Tomcat) by replacing the PORT string by the port number used:

```
# configure proxy:
ProxyPreserveHost On
Proxypass /geoconcept-web ajp://localhost:PORT/geoconcept-web
RedirectMatch permanent ^/$ /geoconcept-web
```

Configuration of the https

In httpd.conf decomment

```
Include conf/extra/httpd-ssl.conf
```

and activate the mod_ssl module

```
# https configuration
LoadModule ssl_module modules/mod_ssl.so
```

In extra/httpd-ssl.conf configure, for example, as follows (replacing <APACHE_HOME> with the Apache server filepath):

```
Listen 443
NameVirtualHost *:443

<VirtualHost *:443>
SSLEngine on
SSLOptions +StrictRequire
SSLCertificateFile "<APACHE_HOME>\conf\server.crt"
SSLCertificateKeyFile "<APACHE_HOME>\conf\server.key"
</VirtualHost>
```

To create your own SSL certificate, run the following commands (replacing <APACHE_HOME> with the Apache server filepath):

```
set APACHE_HOME=<APACHE_HOME>
set OPENSSL_CONF=%APACHE_HOME%\conf\openssl.cnf
"%APACHE_HOME%\bin\openssl" req -new -x509 -sha1 -newkey rsa:1024 -nodes -keyout server.key -out server.crt
 -subj "/O=Company/OU=Department/CN=localhost"
xcopy /Y /V server.* "%APACHE_HOME%\conf"
```

Object manager tab

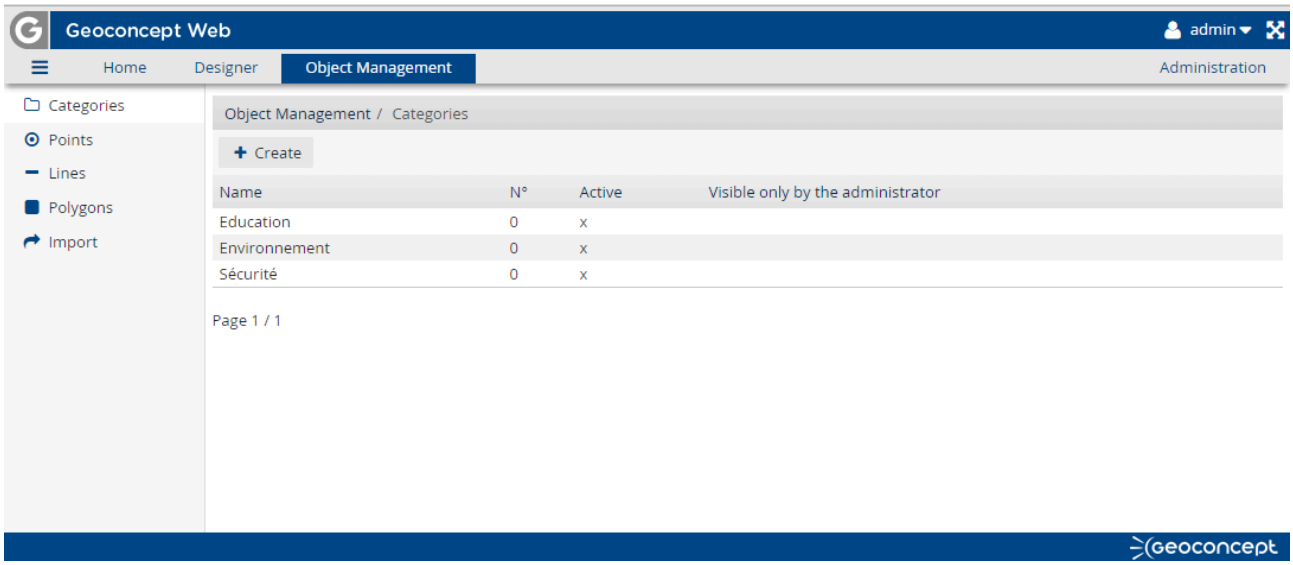
> The Object handling menu is no longer supported in the 2021 version of Geoconcept Web. However it remains available on condition that it is re-enabled by setting the *easy.objectManagement.hideMenu* Administration ‣ Advanced settings to false. The correct functioning of all the elements described in this chapter is no longer guaranteed.

This tab enables creation and handling of vector object display in the interactive map, by saving data in the application's database.

It handles:

- creating categories: a category contains different types of objects. The name of the categories will appear at the top of the cartographic application in the form of drop-down menus,
- creating types of objects: these objects may be point, line or area type objects,
- creating objects: each object belongs to an object Class. The interface allows the user to enter the geometry of these objects manually, and to assign values for the attributes, in the limits of the fields suggested. These attributes will be stored in the application's database
- importing vector objects: from a text file containing the data, the import tool enables insertion in the database of the records contained in the text file,
- an option to validate modifications: any object modified by a contributor is saved in the temporary table. A validation of this modification will enable it to be saved in the production table,
- positions: as seen in the Designer, when a map is selected, the positions on the Geoconcept map are retrieved so they can be used in the web application. This tool allows the user to create and save a new position independently of the Geoconcept map, useable only in the web application,
- stored queries: it is possible to create queries on the point objects stored in the database. The queries will interrogate the attributes of objects via the equals operator. The syntax and the list of fields that can be interrogated will be described in the sections that follow.

Object management interface



The menus used to create a category, an object Class, a position or a stored query operate identically: there is an Add button that opens an interface in which the parameters specific to each menu can be defined.

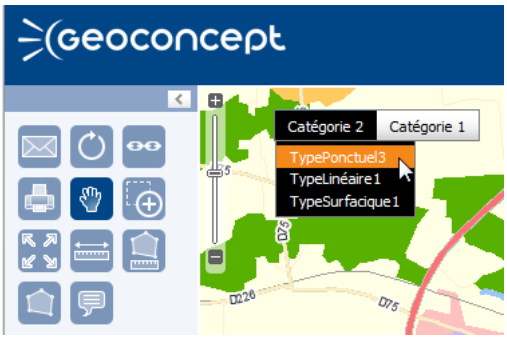
Create a category

The category serves to classify the different vector object Classes. A natural way to classify may be to structure thematically, but this is only one example of how to classify, and can be adapted to each type of project and requirements generally.

The category can regroup object Classes of different types, whether these are points, lines or polygons, as the example below shows.

The category acts like a drop-down menu that it is possible to view when you pass over the category with the mouse. The list of object Classes associated to this category then appears.

Utilisation of categories in the mapping application

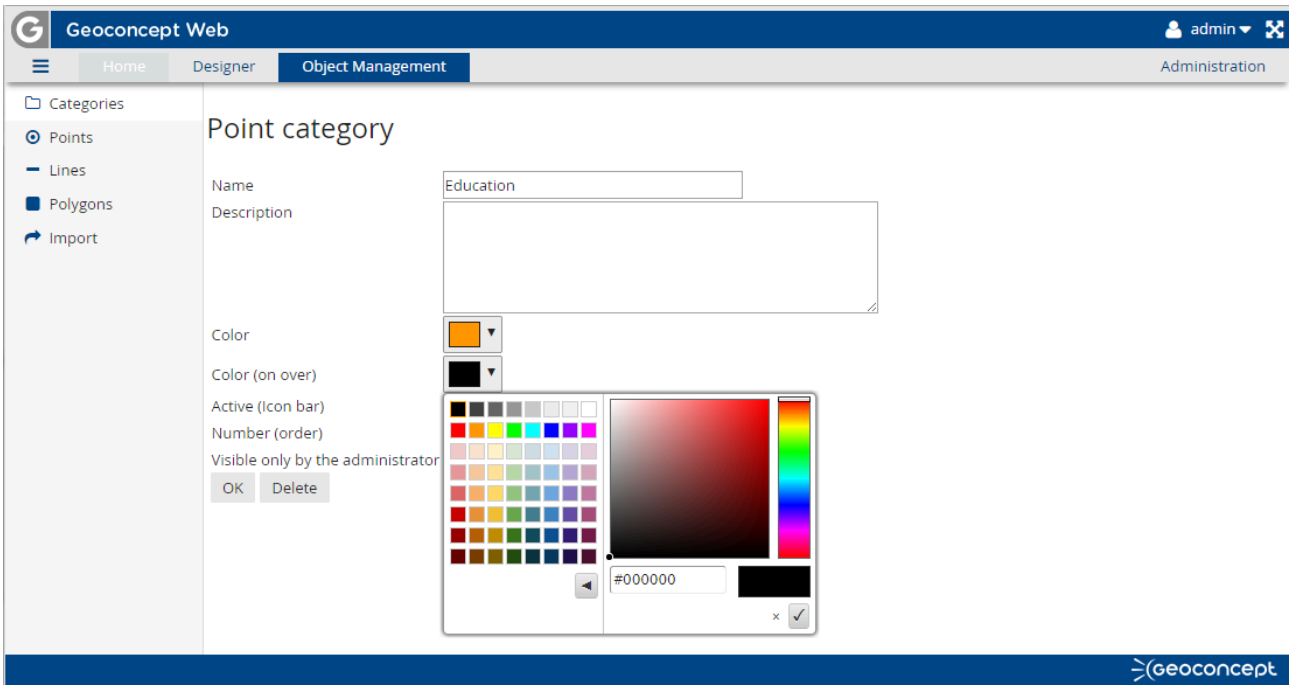


The creation of a category must take place via the web interface. It is created using the Add button available in this interface. This button allows the user to open a form containing the following configuration fields:

- name: this is essential, and is used in the user interface as well as being the name displayed in the menu,
- the description: optional, this is displayed only in the category handling interface, for the benefit of connected users,
- Colour and flyover colour: these are optional. If the HTML colour code has not been assigned, its colour by default in the user interface is blue with the following code: #005AA1. The colour can be assigned by typing the hexadecimal code directly or by using the tools available (colour palette, RGB fields). Clicking on the green arrow to the side of each colour check-box assigns the chosen colour,
- Active: this option is checked by default and allows the category to appear in the user interface. Unchecking this check-box effectively masks the category in the mapping interface (and so masks all the object Classes and objects belonging to this category), including that of the administrator.
- Number: this number is used to classify the order in which the categories are sorted: in the example above, Category 2 is classified number 1, while Category 1 is classified as number 2, explaining the reverse order in their display. By default, the value zero is assigned to the categories, their ordering is then defined by the order of creation,
- Visible only by the administrator: when activated, this option masks the category (and all that it contains) to users of the mapping application. Only the administrator, connected as such via the backoffice interface, can see this category. This check-box is unchecked by default, when the category is created.

The categories created are saved in the table in the database called gw_city_site_category.

Parameters for configuring a category



Click on OK to validate the parameter settings made and save them in the database. This new category will appear in the form of a line in the category menu of the Object management interface and in the form of a menu, empty for the moment, in the user interface.

To delete a category, it will be necessary to click on the corresponding line in the backoffice interface, and then to click on the Delete button.

It is not possible to delete a category if it still contains any object Classes.

Creating an object type

As we have seen elsewhere, there are three types of object Class that can be created in the web application: point, line or polygon.

Creating an object Class is the same procedure every time: click on the Add button to open an interface in which it will be necessary to define the display parameters for all the objects in the Class in question.

> We recommend first creating a category of objects, then a Class of objects, and finally an object. In effect, if an object is created without being assigned to a Class, this Class itself being assigned to a category, it will be invisible for users of the mapping application.

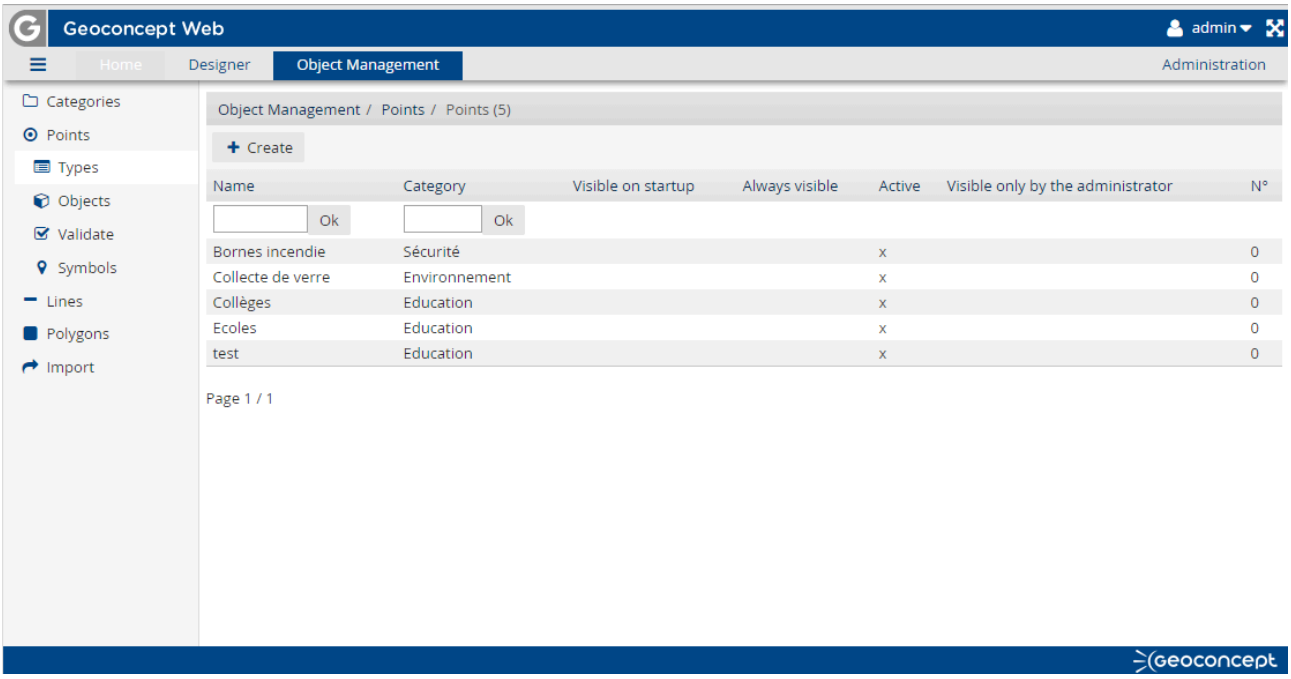
Each Class of object may ultimately be assigned to a group of users: in this case, only the users in the defined groups will be able to see the objects of this Class.

The point Class (or points)

In this Class, objects with X,Y coordinates can be saved and represented by a symbol or an image.

The list of point object Classes saved in the application appears in the interface. It reads and displays certain saved parameters.

Interface for handling object Classes



To modify the parameters saved for a Class, click on the name of the Class to display the form. Once the parameters have been modified, save the changes by clicking on OK. Conversely, click on Delete to delete the Class.

> This deletion is only possible if there are no objects in this Class.

In the form of a point Class, the following fields should be assigned values:

- Name: this is mandatory, and enables display in the drop-down menu of the Class name,
- Category: mandatory. By default, a category is assigned. The user is invited to choose the category among those the user has created via the drop-down menu. The point object Class will then be stored in the category chosen in the user interface,
- Description: optional,
- Group: optional. If one or more groups is defined here, the users of these groups will be able to see the objects. The other users will not have this option.
- Image: for the 12 preset map scales in Geoconcept retrieved in the web application, it will be necessary to define a display of objects by Class of points. So the administrator can choose an icon within the database of images via the drop-down menu that is suggested to the administrator. For more details about the database of saved images in the application, please refer to la Section Images,
- Active: by default checked, this check-box displays the point Class in the mapping interface. Unchecked, nobody will see this Class and the objects associated to it,
- Visible exclusively by the administrator: unchecked by default, this check-box can restrict the display of this Class and its associated objects in the mapping interface to the administrator connected with their

own identifiers. This utilisation can, for example, be deployed by an administrator wishing to prepare and refine data before publishing them.

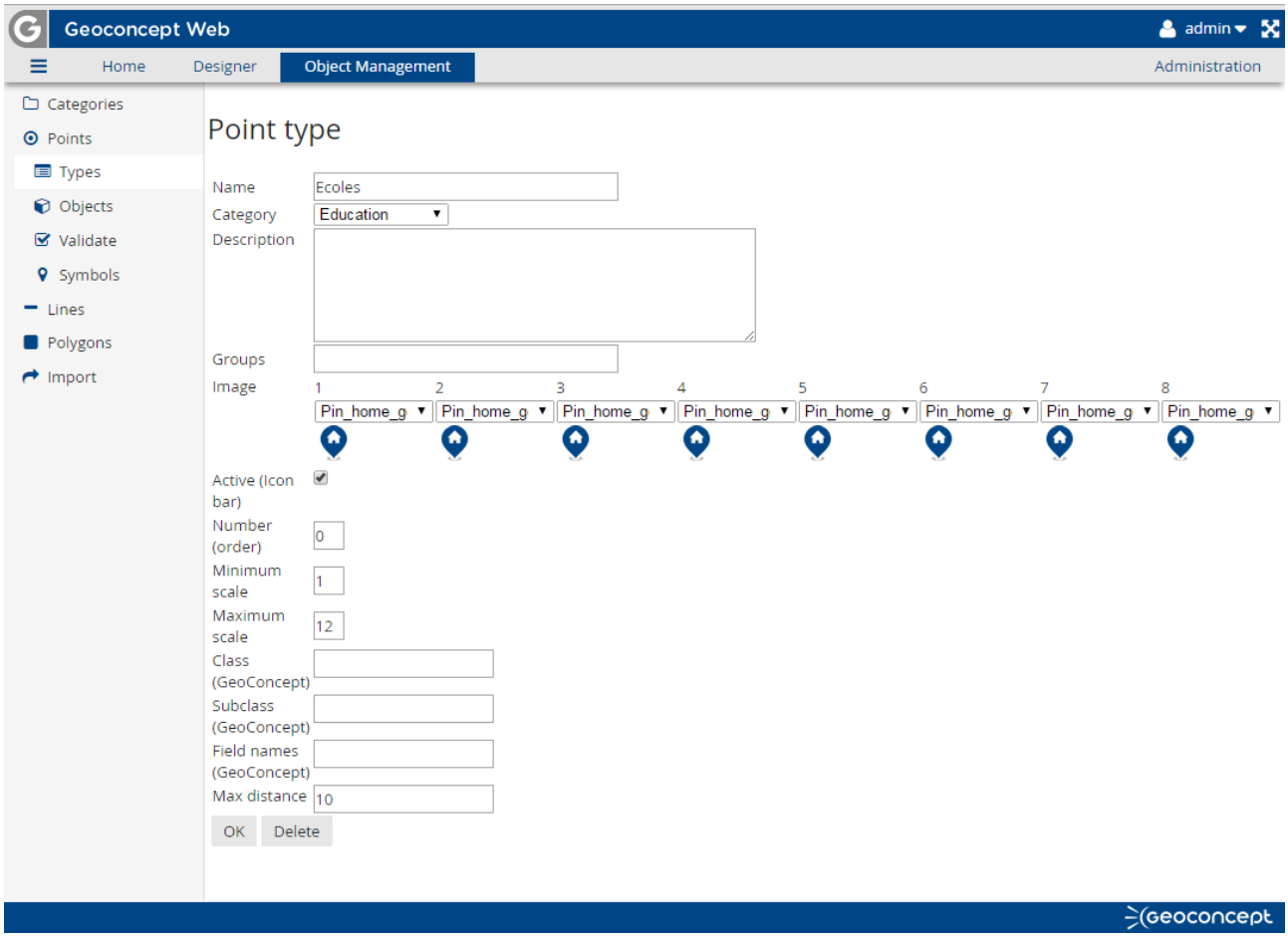
- Number: this allows the user to classify the Classes of points belonging to a single category. By default, the value is zero and the display order follows the order of creation,
- Minimum and maximum scale: from 1 (min) to 12 (max), these scales limit the display of objects to a scale falling within the range indicated,
- Class, Subclass, Fieldnames (Geoconcept) and Max distance are notions that will be explained in the section called “Additional attributes”.

Clicking on OK allows the user to save the parameters for the Class.

Note: Classes of points are saved in the database table called: gw_city_site_type. A unique identifier is created for each Class of points. This identifier is important when integrating data directly in the database. This subject will be revisited in a separate section of the documentation: Connecting the database to a Geoconcept map.

When creating a point Class, no image is saved for the preset scales. If the administrator wants to assign the same image to the 12 preset scales of the web application: selecting just the image for scale 12, then clicking on OK, the same image is saved for all the preset scales. This manipulation is no longer possible once an image has been assigned for each preset scale.

Parameters for handling a point Class



Line Class

Saved lines will be stored in this Class. The parameters enable definition of the display of the line in the web interface.

Use the same procedure to create a line Class as for a point Class, using the Add button. The parameters to configure correspond to the display parameters for a line.

The parameters available are the following:

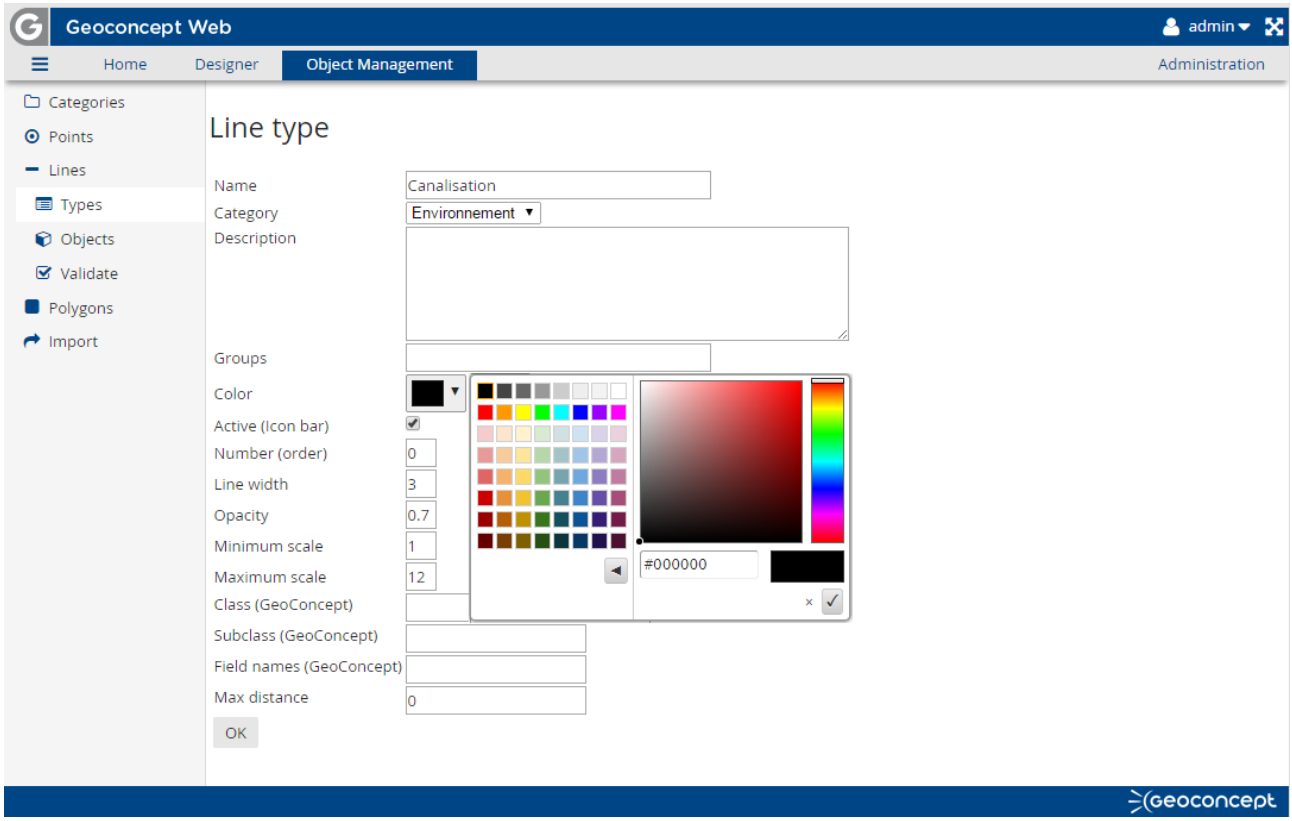
- Name: mandatory, this is the name that will display in the user interface,
- Category: mandatory, this enables classification of the Class in question in a category,
- Description: optional, this appears in the list of line Classes,
- Group: optional. If one or more groups is defined here, the users of these groups will be able to see the objects. The other users will not have this option.
- Colour: optional, this colour parameter allows definition of the colour of the line. By default, the colour is black. This colour can be specified via the colour palette or the RGB fields to be filled,

- Active: the check-box is checked by default to enable display of the Class in the interface. Unchecked, the Class and its objects do not appear in the interface,
- Visible only by the administrator: the check-box is unchecked by default. When it is activated, only the administrator connected to the backoffice can see this Class and its objects in the user interface,
- Number: this defines the order in which the lines in a same category will display,
- Width and opacity: in pixels, these display parameters for all line objects belong to the Class,
- Display direction: unchecked by default, this option displays the arrows showing the direction of capture for the line on the object,
- Minimum and maximum scales: from 1 (min) to 12 (max) these enable restriction of the display of objects to the range of scales defined by minimum and maximum,
- Class, Subclass, Name of fields (Geoconcept) and Max Distances are notions that will be explained in the section called “Additional attributes”.

Clicking on OK allows the user to save the parameters for the Class.

The point object Classes are saved in the database table called gw_city_route_type. A unique identifier is created for each type of line. This identifier is important when integrating data directly in the database.

Parameters for a line Class



The polygon Class

In this Class, simple polygons are saved. The parameters enable definition of the display of all the polygons in the Class in the web interface.

To create a polygon object Class, follow the same procedure as for a point Class, using the Add button. The parameters that need to be assigned values correspond to the display parameters for a line.

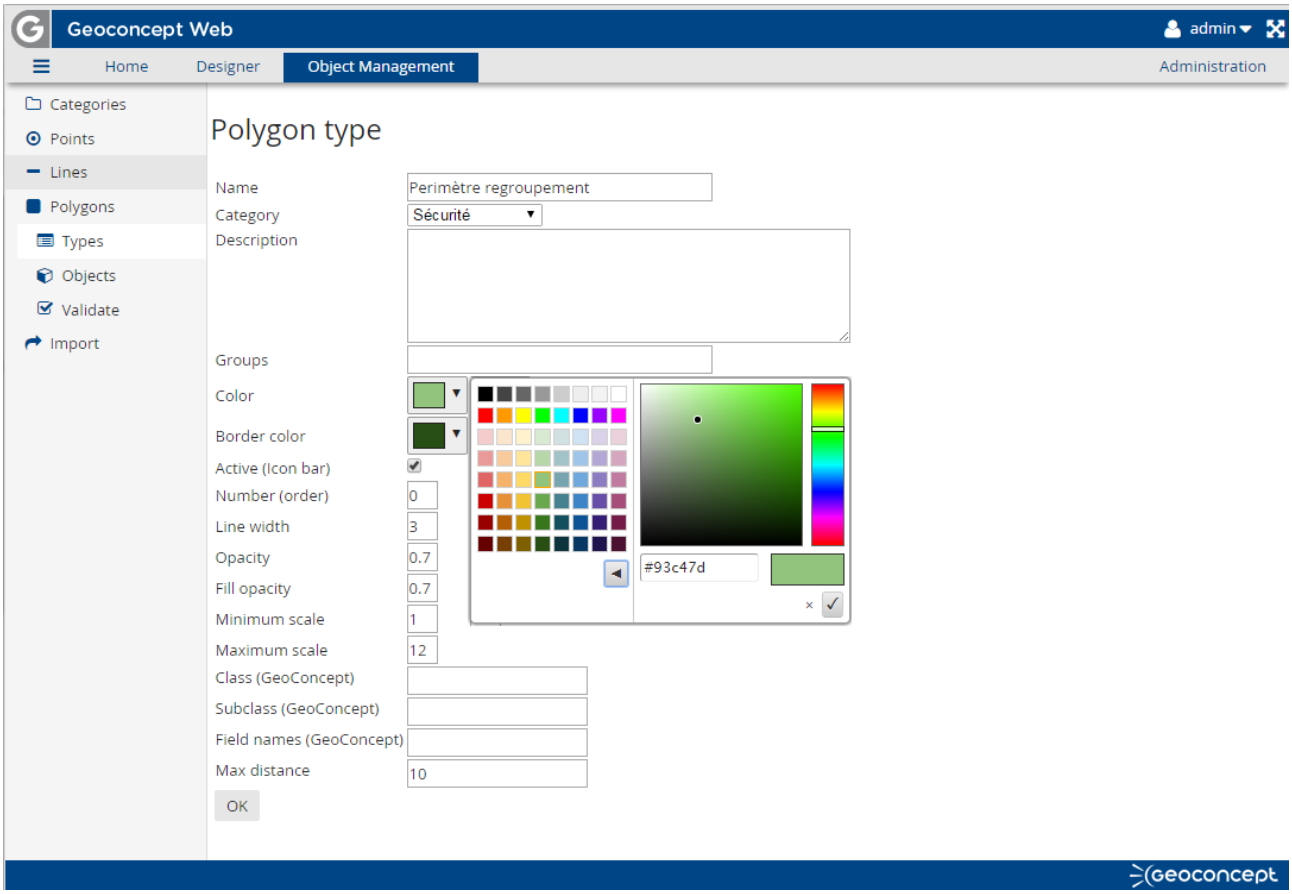
The parameters available are the following:

- Name: mandatory, this is the name that will display in the user interface,
- Category: mandatory, this enables classification of the Class in question in a category,
- Description: optional, this appears in the list of polygon Classes
- Group: optional. If one or more groups is defined here, the users of these groups will be able to see the objects. The other users will not have this option.
- Colour and border colour: optional, these parameters enable definition of the polygon colour. By default, the colour is black. This colour can be specified via the colour palette or the RGB fields to be filled,
- Active: by default this is checked to enable display of the Class in the interface. If it is unchecked, the Class and its objects do not appear in the interface,
- Visible exclusively by the administrator: unchecked by default. When activated, only the administrator connected to the backoffice can see this Class and its objects in the user interface,
- Number: this enables definition of the order in which the polygon Classes will be displayed in a single category,
- Width and opacity: in pixels these are the display parameters for all polygons belonging to the Class,
- Minimum and Maximum scales: from 1 (min) to 12 (max), they limit the display of objects to a scale falling within this range,
- Class, Subclass, Name of the fields (Geoconcept) and Max Distance are notions that will be explained in the section called “Additional attributes”.

Clicking on OK allows the user to save the parameters for the Class.

Note: the point object Classes are saved in the database table called gw_city_polygon_type. A unique identifier is created for each polygon Class. This identifier is important when integrating data directly in the database.

Parameters for a polygon Class



Creating objects manually

This section explains how to create an object manually via the intermediary of the web interface and its associated forms.

For each object that can be created, whether a point, line, or polygon, the procedure is the same. The administrator (or contributor) connected must click on Add to create a new object. The interface shows the fields to fill on the left, and on the right, a map in which the geometry of the object can be captured manually.

> It is essential to create a category and a Class before creating the objects.

Adding a point object

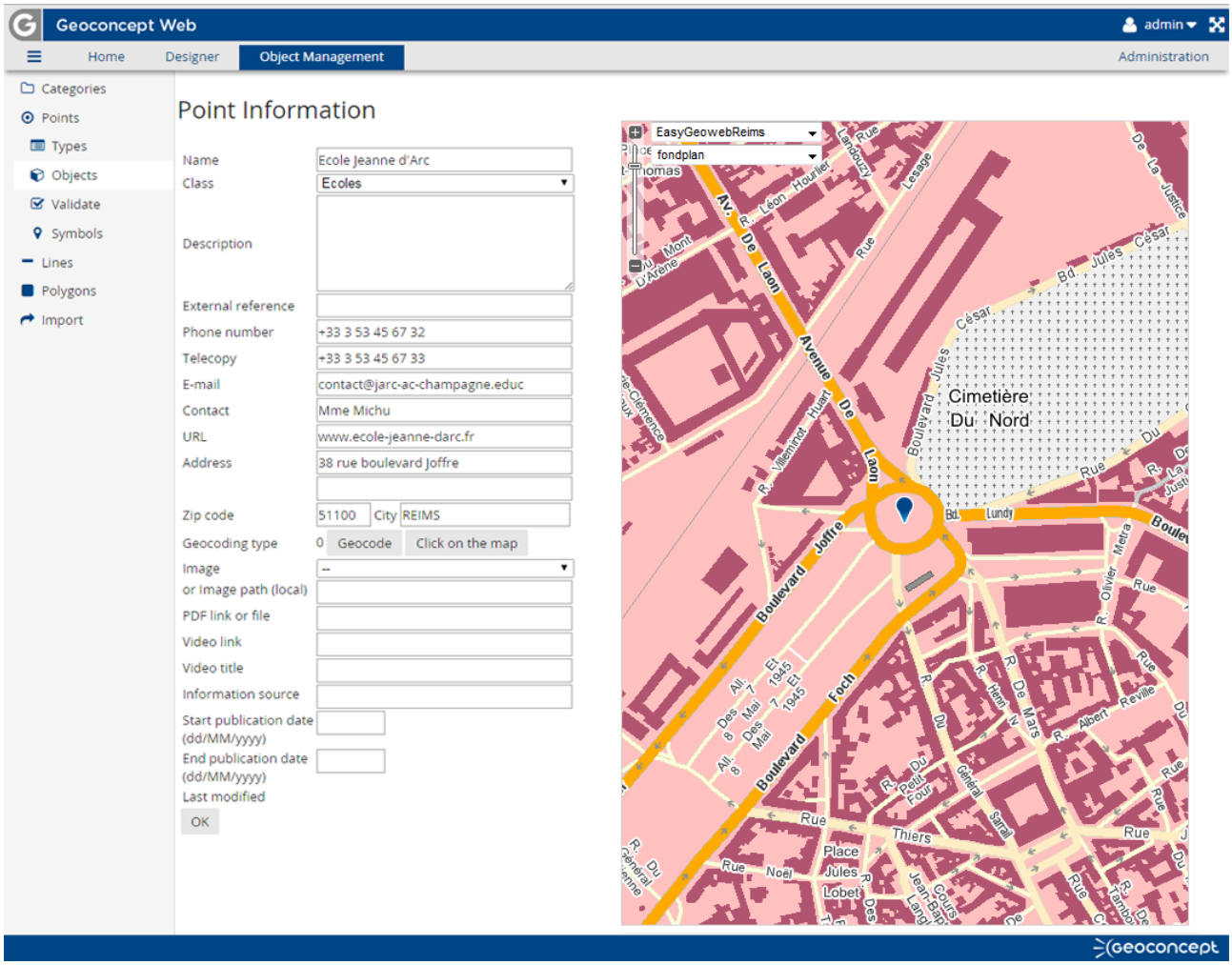
The form for creating a point object includes the following fields:

- Name: mandatory: this allows the user to assign a name to the point created,
- Class: mandatory: this makes it possible to associate the point to a Class, ad so to a pre-defined appearance. The display of all points within one Class follows a click on the name in the drop-down list in the user interface. The Class does not appear in the infobox,

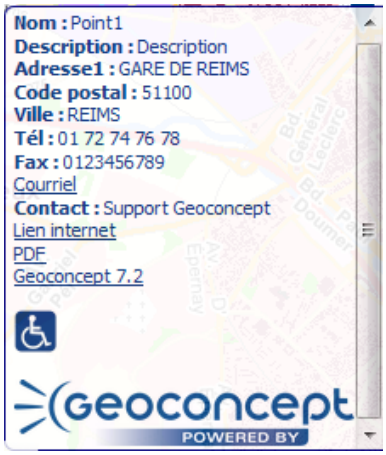
- Description: optional, allows the user to input text,
- Contact: optional, the name of the person for whom the contact details are specified,
- Telephone and fax: optional: the numbers appear associated to a representative icon,
- Email: optional: this parameter allows specification of the contact email address,
- URL: optional: the web URL enabling a page to be opened in another tab in the browser. The URL must start with http://,
- Address, post code, and town: these information items are optional, and if assigned values will appear in the infobox. They may serve for positioning the point on the map via the geocoding module using the Geocode button,
- image or Image path (local): optional, this allows addition of an image to the infobox. This image can be stored in the images database, or directly on the server. It is therefore necessary to supply an access path to the image,
- PDF file: optional, this option provides a link in the infobox to open a PDF file stored on the server,
- Video link and video title: optional, this sets up a link to an Internet page external to the application. The name appearing in the field called video is the name that appears in the infobox,
- Publication start and end dates: optional, the point object will only appear in the mapping interface if the current date is included in the dates supplied. If no date has been supplied, the object will always be displayed without any condition on the date.

All the fields filled in the form with values will appear in the infobox, except for the Class, the external reference, the publication start and end dates and the source of the information. The fieldname of an unfilled field will not appear in the infobox.

Creating a point in the dedicated interface



Infobox created in the mapping application from the previous form to modify



The point objects created via the web interface are saved in the table called gw_city_site.

Objects stored in this table are only visible by a user connected also to the application backoffice, so long as the objects have not been validated.

In a web site accessible to the wider public, an administrator can choose to add objects. So long as they have not validated the display of objects in the mapping interface, the objects are not validated. This means the public will not see these objects.

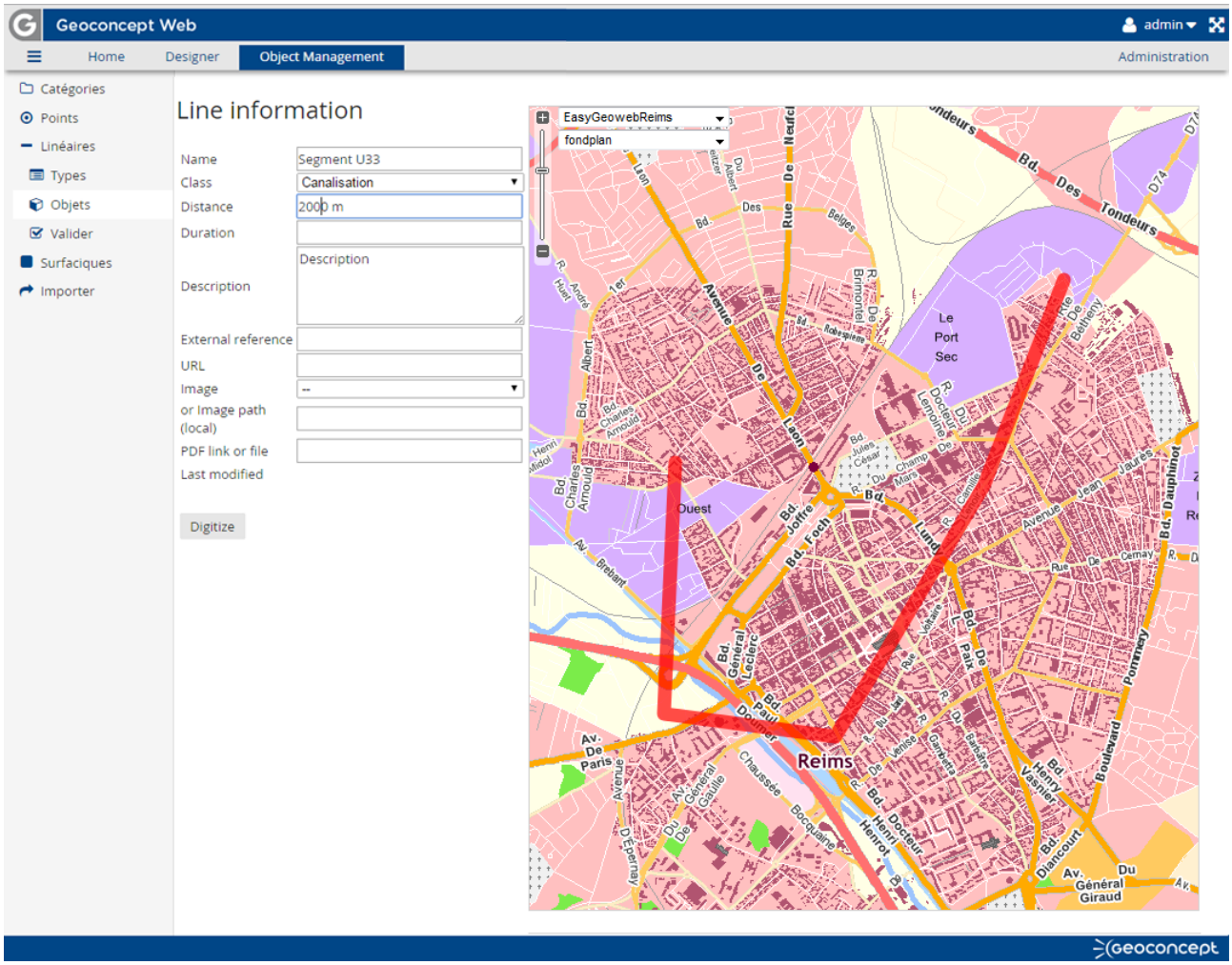
Adding a line object

The form for creating a line object includes the following fields:

- Name: mandatory, this enables a name to be given to the line created,
- Class: mandatory, this serves to associate the line to a Class and therefore to a pre-defined appearance. The display of all the lines in a same Class occurs when the name in the drop-down list in the user interface is clicked on. The Class does not appear in the infobox,
- Distance / Duration: optional, these options serve to define a distance and a duration assigned to the line,
- Description: optional, allows the user to input text,
- URL: a web URL that opens the page in another browser tab. The URL must start by http://,
- image or Image path (local): optional, this allows addition of an image to the infobox. This image can be stored in the images database, or directly on the server. It is therefore necessary to supply an access path to the image,
- PDF file: optional, this option provides a link in the infobox to open a PDF file stored on the server,
- Zip URL: optional, this allows a link to a URL to be stored so a file available on an Internet site can be downloaded;
- The Capture and Reverse buttons: inputting in the map using the mouse and the Capture buttons is mandatory. The Reverse button reverses the direction of capture for the line, visible thanks to the arrows. A double-click in the map allows capture of the points on the line object.

All the fields filled in the form will appear in the infobox, except the Class and the publication start and end dates, the external reference and the information source. The fieldname of an unfilled field will not appear in the infobox.

Interface for creating a line manually



Infobox for the object created in the previous form

The line objects created via the web interface are saved in the gw_city_route table.

Objects stored in this table are only visible by a user connected also to the application backoffice, so long as the objects have not been validated.

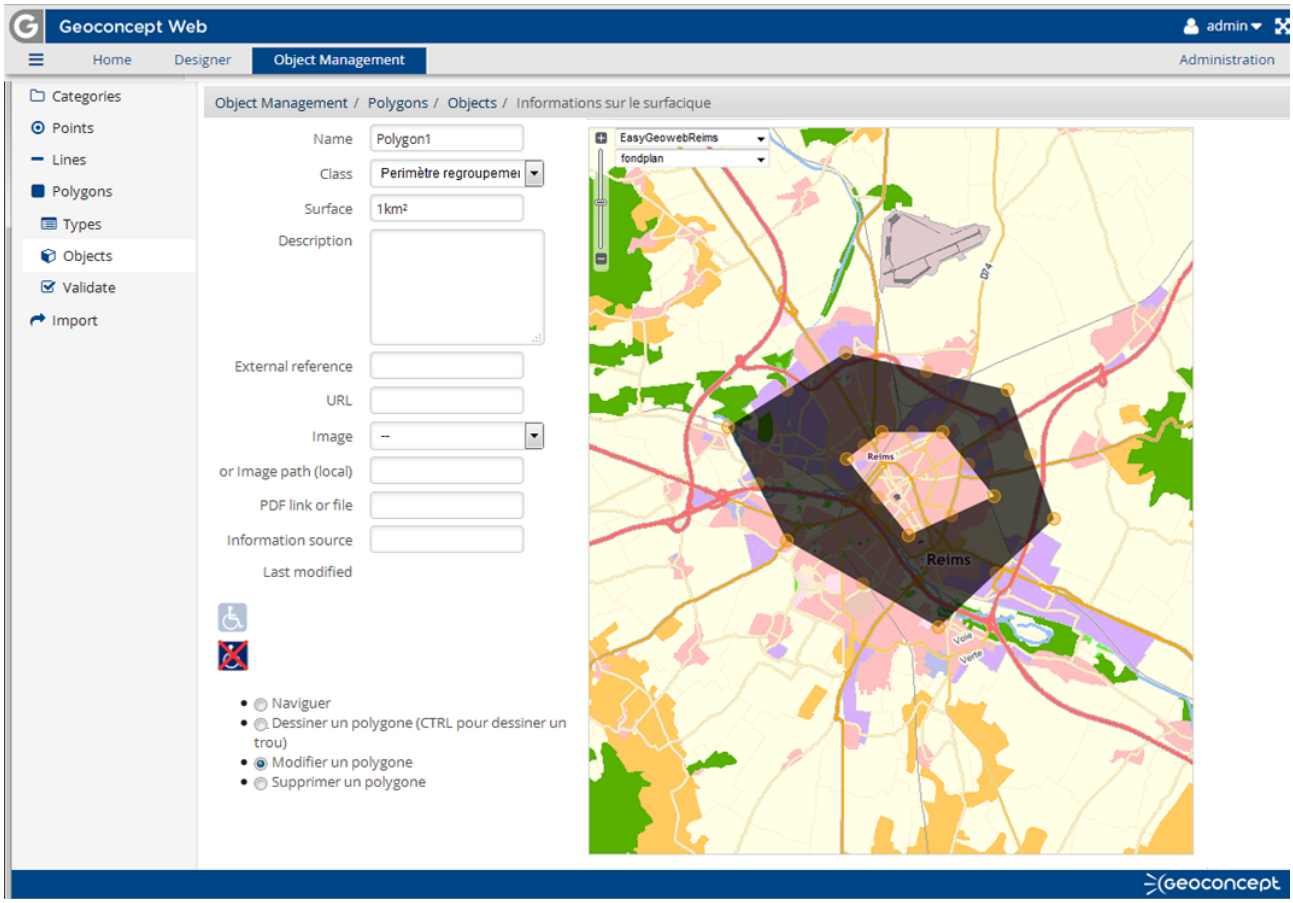
Adding a polygon object

The form for creating a polygon object includes the following fields:

- Name: mandatory, this enables a name to be given to the polygon created,
- Class: mandatory, this enables the polygon object to be associated to a Class and therefore to an appearance defined previously. The display of all the polygons in the same Class is achieved by clicking on the name in the drop-down list in the user interface. The Class does not appear in the infobox,
- Polygon: optional, this option enables definition of an area assigned to the polygon,
- Description: optional, allows the user to input text,
- URL: a web URL that opens the page in another tab of the browser. The URL must start with the HTTP protocol,
- image or Image path (local): optional, this allows addition of an image to the infobox. This image can be stored in the images database, or directly on the server. It is therefore necessary to supply an access path to the image,
- PDF file: this option provides a link in the infobox that opens a PDF file stored on the server,
- Zip URL: optional, this allows a link to a URL to be stored so a file available on an Internet site can be downloaded;
- The Capture button; capture in the map using the mouse and the Draw polygon button is mandatory. The new version creates a hole in the polygon using the CTRL button on the keyboard. It is also possible to modify the polygon using the Modify a polygon button. Activating this option, it is possible to modify the edges of the polygon by moving the circles displayed.

All the fields filled in the form will appear in the infobox, except for the Class, the external reference, and the information source. The title of an unfilled field will not appear in the infobox.

Interface for manual creation of a polygon to be modified



The infobox of the object created in the previous form

Validating modifications

The vector objects displayed in the mapping interface by all current users with access to the application are those stored in:

- the gw_city_site_prod table for points;
- the gw_city_route_prod table for lines;
- the gw_city_polygon_prod table for polygons.

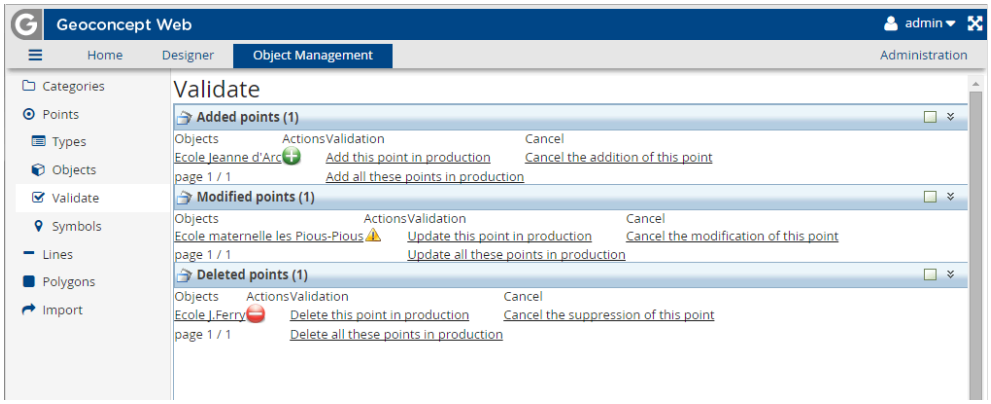
The Validate modifications menus (available for points, lines and polygons) enable data to be copied from the gw_city_site, gw_city_route and gw_city_polygon tables into gw_city_site_prod, gw_city_route_prod and gw_city_polygon_prod respectively.

These allow the user to compare two tables (for example gw_city_site and gw_city_site_prod in the case of point objects) and to highlight the differences.

The aim is to always dispose of the same records in both tables, while maintaining the possibility of publishing the modifications in differed time, at the discretion of the administrator.

In this way, in order to “switch on” a modification on an object captured by a contributor to make it visible to everyone in the mapping application, it will be necessary to proceed via the Validate modifications menu.

Interface for validating modifications on objects



This illustration shows how the administrator, or a contributor:

- has added a point called POI4: this point is present in the gw_city_site table, and is therefore visible only by the administrator or a contributor in the mapping portal. Click on Add this point in production to copy the record into the gw_city_site_prod table. The POI4 object then becomes visible to everyone. A click on the Cancel the addition of this point deletes the object in the gw_city_site table, without copying it into the gw_city_site_prod table.
- has modified the point POI1: the administrator has modified the attributes or its geographic position. The administrator or contributor views their modifications in the mapping interface, while the public user views the non-modified object. A click on the Update this point in production publishes modifications made to all users by copying the modifications into the gw_city_site_prod table. A click on the Cancel the modification of this point restores the status of the record in the gw_city_site table.
- has deleted the point PO13. The administrator or contributor no longer sees this object in the mapping interface, while the public at large still sees it. A click on Delete this point in production deletes it also from the gw_city_site_prod table, that is, for everyone. This action is irreversible. A click on the Cancel deletion of this point button restores the status of the record in the gw_city_site table by copying the object from the gw_city_site_prod table.

The Add / Update / Delete all these points in production functions serve to apply the action in question to all the objects under consideration.

Importing objects from a text file

The platform offers the option to import vector data in bulk via the Import objects menu. This allows data import from a text file that must respect a format in order to respect in turn the requirements of the interface to fill the corresponding fields.

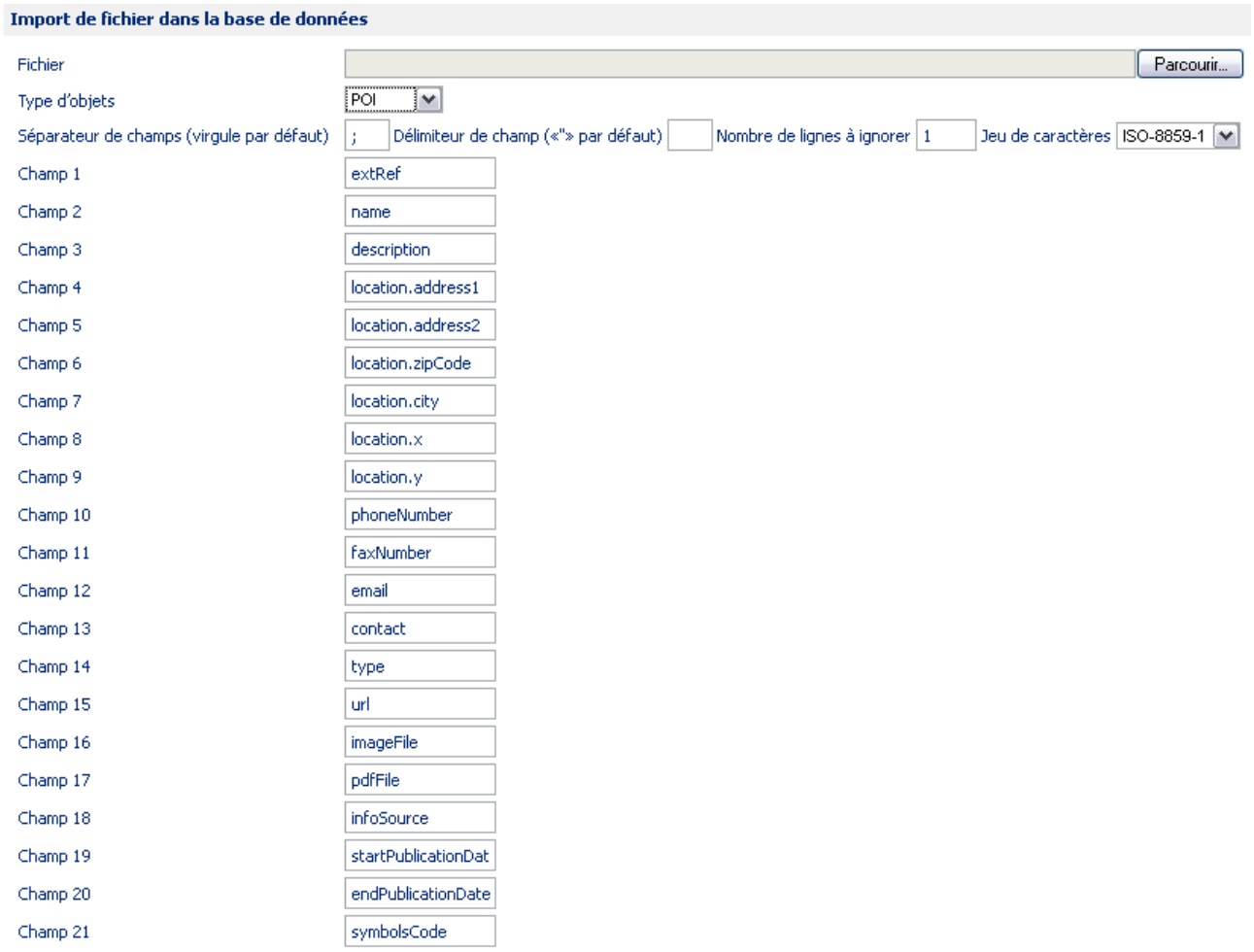
This menu enables import of point, line, or polygon objects. The selection is made via the Type of object drop-down list.

Importing point objects

You need to choose the .txt file to import, the POI Class in the Type of object list. it is then necessary to choose the field separator, the field delimiter if present, the number of lines to ignore (header lines) and finally the character set.

This importation will allow completion of the gw_city_site table.

Structure of the imported text file for points



You will need to respect the precise structure as expected by the application. The text file must then dispose of 21 fields, even if these happen to be empty. The only non-empty field, that it is mandatory to

complete, is the Class field (field 14: this is the name of the point object Class in which the new imported objects will be stored. The field must bear exactly the same name as the Class to which it must belong.

The extRef field (field 1) is the key field that can be used when updating data. In the gw_city_site table, this will be the EXTREF field.

Below is an example of a text file that can be imported into the application via this menu, in order to update two objects in the TypePonctuel1 Class:

Example of a text file that can be imported

```
ceci;est;la;ligne;à;ignorer;;;;;;;;;;;;;;;
1;POI5;Description du POI5;adresse 1;adresse 2;01234;Reims;748500;2442500;0123456789;0123456789;support@geoconcept.com;Support
GeoConcept;TypePonctuel1;http://geoconcept.com;;;;;;
2;POI6;Description du POI6;adresse 1;adresse 2;05876;Reims;748400;2442300;0123456789;0123456789;support@geoconcept.com;Support
GeoConcept;TypePonctuel3;http://geoconcept.com;;;;;;
```

The result of the import is as follows:

Result of the previous import

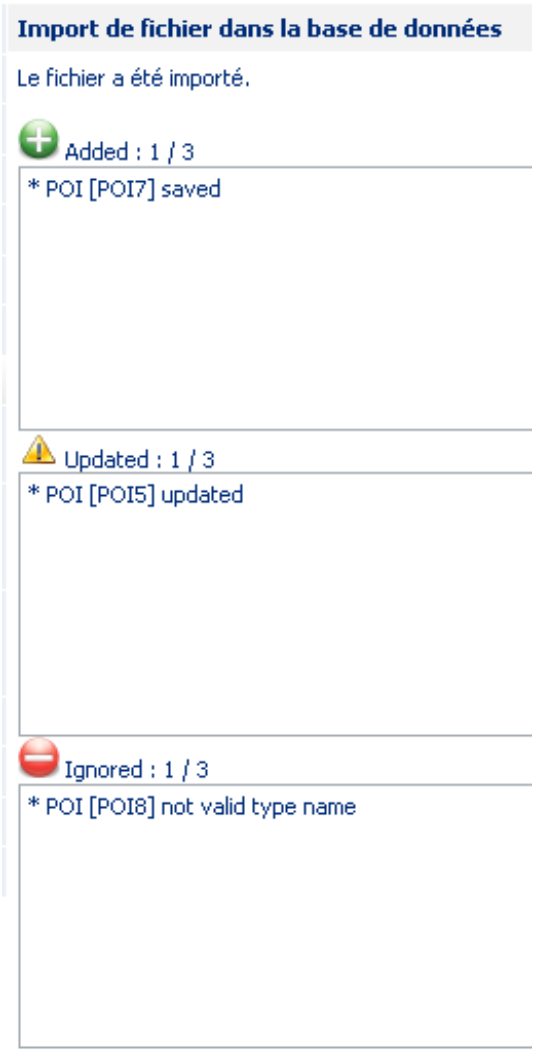
The two new point objects have been imported into the gw_city_site table and are therefore visible by the administrator in the mapping application and in the object management interface.

A new import with the following file will give the results below:

Example of a file to import

```
ceci;est;la;ligne;à;ignorer;;;;;;;;;;;;;;;
1;POI5;Description du POI5;adresse 1;adresse 2;01234;Reims;748500;2442500;0123456789;0123456789;support@geoconcept.com;Support
GeoConcept;TypePonctuel1;http://geoconcept.com;;;;;;
3;POI7;Description du POI7;adresse 1;adresse 2;05876;Reims;748400;2442300;0123456789;0123456789;support@geoconcept.com;Support
GeoConcept;TypePonctuel3;http://geoconcept.com;;;;;;
4;POI8;Description du POI8;adresse 1;adresse 2;05876;Reims;748400;2442300;0123456789;0123456789;support@geoconcept.com;Support
GeoConcept;TypePonctuel4;http://geoconcept.com;;;;;;
```

Result of the import

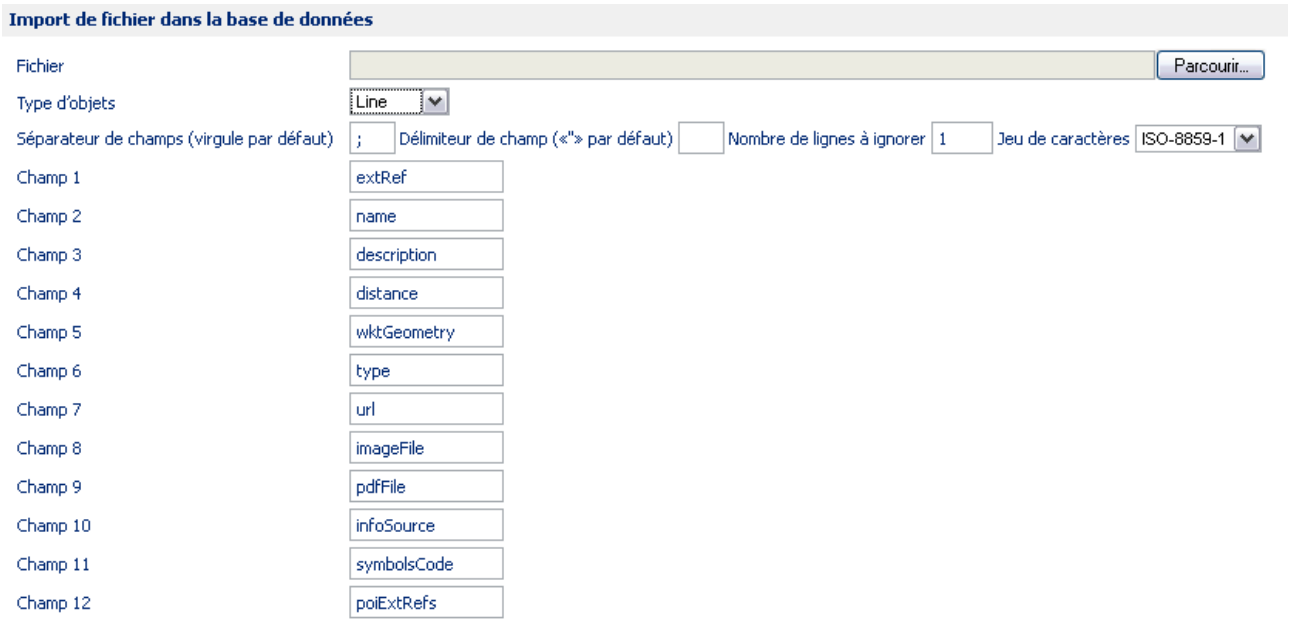


Importing line objects

The Object import menu imports line objects from a text file. It will be necessary first to select in the drop-down list the Class of objects by choosing Line. This import enables completion of the gw_city_route table.

With immediate effect, the fields to be assigned values for an object of this class will change:

Structure of an import of a text file for lines



The fields that can be filled are the same as those available in the input form of a line object.

The mandatory field is the Class field (field 6) that must have the same name as an existing line object Class. The extRef field (field 1) serves as a key when updating a record.

Field 5 is the object Geometry field: the geometry must be saved in WKT format to be integrated in the application.

> The WKT field is a field format provided by Geoconcept for exporting object geometry in a text format.

Here is an example of a text file that enables integration of a Line2 object in the TypeLine1 line object Class.

Example of a file to import

```
"extref";"name";"description";"distance";"wktgeimetry";"type";"url";"imagefile";"pdfFile";"infosource";"symbolscode";"poiextrefs"
2;"Line2";;;"LINESTRING(707000 2443400,747000
2460000)";"TypeLinéaire1";http://geoconcept.com;C:\Logo_GeoConcept.jpg;C:\Presentation_GeoConcept.pdf;;;
```

The following image shows the result: the Line2 object has been integrated in the TypeLine1 Class.

Updating data is achieved via the extRef field; this update will appear in the Updated central group.

If the line object Class is not present, or is not recognised, the object will not be added to the gw_city_route table and an error message will appear in the Ignored group.

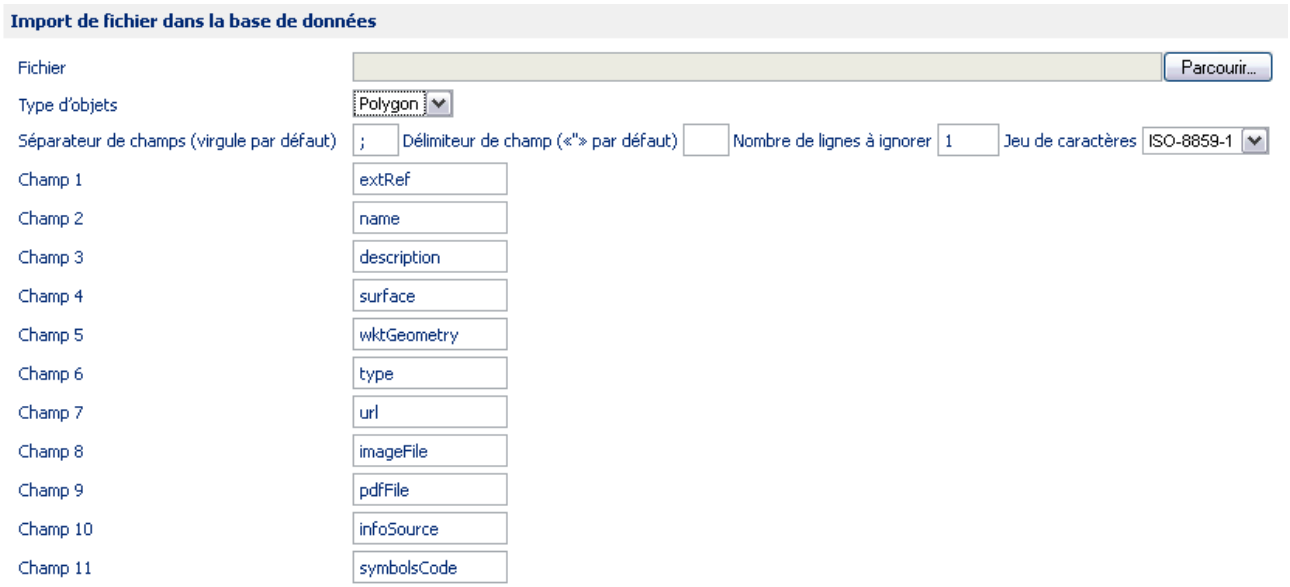
Interface summarising the imported data

Importing polygon objects

The Object import menu enables import of polygon objects from a text file. To do this, it is necessary in the first place to select in the drop-down list the object Class by selecting Polygon. This import will enable you to complete the gw_city_polygon table.

With immediate effect, the fields to be assigned values for an object of this class will change:

Structure of a text file import for polygons



The fields that can be filled are the same as those available in the input form for a polygon object.

The mandatory field is the tupe field (field 6), that must have exactly the same name as an existing polygon object Class. the extRef field (field 1) serves as a key when updating a record.

Field 5 is the geometry field for the object: the geometry must be saved in WKT format to be integrated within the application.

> The WKT field is a field format provided by Geoconcept for exporting object geometry in a text format.

Here is an example of a text file that allows integration of a Surface2 object in the TypePolygon1 polygon object Class.

Example of a file to import

```
["extref";"name";"description";"surface";"wkt";"type";"url";"imagefile";"pdffile";"infosource";"symbolscode"
2;"Surface2";"Description de surface2";;"POLYGON((729994.4966666667 2437766.91,725594.4966666667 2437400.6877777777,723761.1633333333
2435386.4655555557,723761.1633333333 2434104.6877777777,725961.1633333333 2432639.798888889,728711.1633333334 2432456.6877777777,731094.4966666667
2433006.021111111,732377.8300000002 2434837.132222222,732377.8300000002 2437034.4655555557,729994.4966666667 2437766.91))";"TypeSurfaciquel";;;;;
```

The following image shows the result: the Surface2 object has been integrated in the TypePolygon1 Class.

Updating data is achieved via the extRef field; this update will appear in the Updated central group.

If the polygon object Class is not present, or is not recognised, the object will not be added to the gw_city_polygon table, and an error message will appear in the Ignored group.

Interface summarising the imported data

Conserve on import of objects

The objects can be added to the web application by an import of a text file containing the attributed and geometric data on objects. This manipulation can be performed remotely without accessing the server where the application and the database are stored.

The name of the Class in which the objects must be imported is given in the object menus without any need to know their identifier in the database.

This manipulation is therefore open to all users who have the right to access the backoffice. It should, nevertheless, be remembered that to add objects via this menu enables them to be added to the gw_city_site, gw_city_route, and gw_city_polygon tables. To switch them into production and make them visible to all users of the mapping application, it will be necessary to validate them using the object validation menus.

> The coordinates system in which the object geometry is written (X Y for points, WktGeometry for line and polygon objects) must be the same as that of the web application map.

Additional attributes

The vector objects in the web application are stored in the database with a restricted number of attributed fields, The administrator has the possibility of specifying additional attributes for vector objects. These attributes are stored in the objects on the Geoconcept map and are retrieved by the web application.

To call these additional fields, it will be necessary for the administrator / contributor to know the exact name of the Class in Geoconcept, along with the exact Subclass and field names.

The specification is performed during the configuration of the Class of vector objects. In the cases of the three different point object types, the text boxes provided need to be filled:

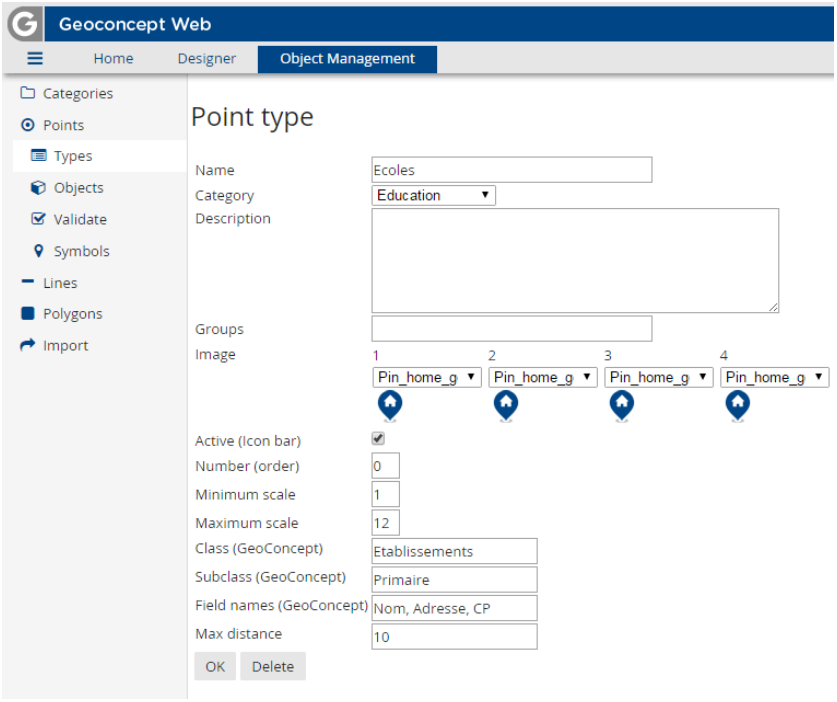
- Class (Geoconcept),
- Subclass (Geoconcept),
- Field names (Geoconcept),
- Max distance (in pixels),

By filling in these fields, the vector object stored in the web application database is virtually linked to the Geoconcept object (that belongs to the Class and Subclass as specified) by its geographic position within a radius of the maximum distance specified. This link is only valid between the web application and the Geoconcept map via a query that allows a return of attributed information on an object by specifying the Class, the Subclass, the name of the fields and the maximum distance around the object in question.

In concrete terms, when the user clicks on a vector object in the web application, its X and Y coordinates are sent to the Geoconcept map, that in turn interrogates the objects in the specified Class / Subclass within a radius of the specified distance,

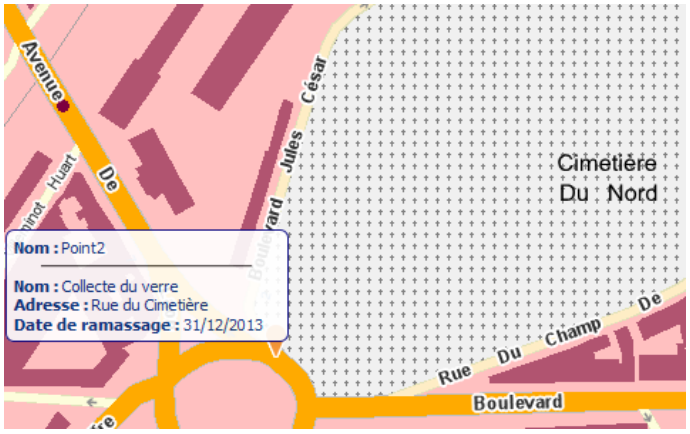
It is therefore necessary that the object saved in the gw_city_site table is located at the same coordinates as its twin object in the Geoconcept map. This is clearly the case if the objects in the web application originate from an export from the Geoconcept map.

Configuration of additional attributes



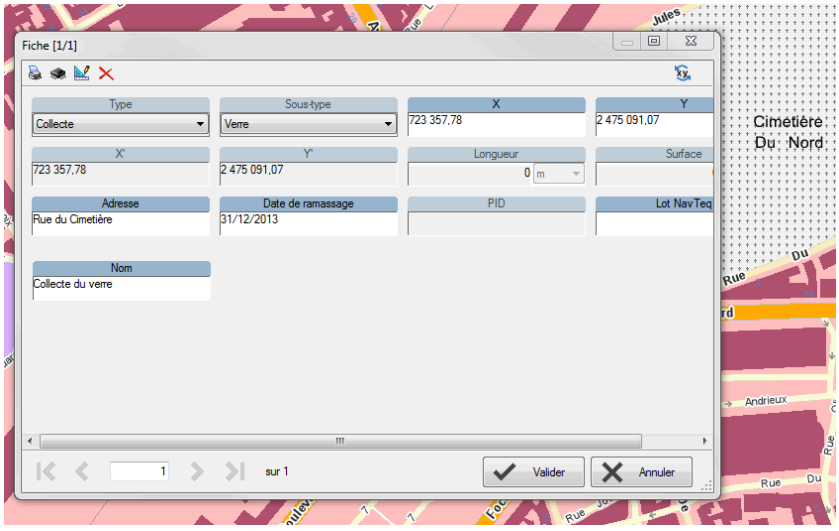
To access these additional attributes: it is necessary to supply exact information regarding the Geoconcept Class, the Subclass, and the names of the fields that will be displayed in the infobox.

Preview of the configured infobox



This means that in the mapping application, a click on the point will open the additional infobox for the fields sourced by the Geoconcept map. The name of the additional fields is the name specified in the Geoconcept map.

Preview of the Geoconcept form for the same object



We need to check that these fields, not stored in the database, are filled by the information derived from the Geoconcept map object.

> These additional fields are sourced by the Geoconcept map via a query sent by Geoconcept Web. They cannot, under any circumstances, be interrogated by the configured query tool.

Addition of symbols to the infobox

It is possible to add icons, images, or symbols (in addition to the configurable image in the infobox) to the infobox of vector objects: these will be placed in the lower part of the infobox.

To add this symbol to the infobox, the symbol must be saved in Geoconcept Web's images database.

In the *Object manager / Points* tab, a Symbols menu allows you to add a symbol, that is, to choose one (or two) images that correspond to this symbol. The images can then be chosen in the databank of images in the Designer.

The symbol is configured in this way. The display of symbols is achieved at the level of each object. As soon as a symbol has been configured, it will be possible to choose it in the attributes of each object, in the lower section of the attributes. By default, no defined symbol is selected. By clicking on the icon (in the case where the symbol only contains one image) or on one of the two icons (in the case where the symbol is defined with two images), you select the image that will appear in the infobox. To delete it from the infobox display, you will need to click again on the corresponding icon.

Connection from the database to a Geoconcept map

In order to update the vector data present in the mapping application and so stored in the Geoconcept Web database, it is possible to configure links between the Geoconcept map and the database.

This section is not designed to replace the Geoconcept reference guide in relation to the setting up of such links, but to adapt their implementation in the special case of the Geoconcept Web database.

When importing objects from a Geoconcept map and the Geoconcept Web database, the constraints of fields in objects in the Designer must be respected. In this way, a Class must absolutely be associated to each object imported into the Geoconcept map in the database (the value of the Class is visible in the gw_city_site_type table, for point objects for example). In addition, the geocode_score and geocode_type fields of point objects must not be null: a value of zero must in this way be assigned to them by default.

Note also, that in the case of line or polygon objects, the geometry of the WktGeometry field respectively in the gw_city_route (gw_city_route_prod) and gw_city_polygon (gw_city_polygon_prod) tables must be written in WKT format, available when exporting from Geoconcept.

Simplification of complex geometries

This section is aimed at expert users.

Line or polygon objects with a complex geometry can be simplified in order to optimise their display in the web application, in the case of a very large number of objects and points on each object. This simplification is automatically applied by the application between a scale of 12 and the scale specified in the parameters. A field called wktGeometrySimplified is present in the database in the tables related to the objects, and is filled during the first display of the object in question (line or polygon).

The administrator can configure the minimum scale up to and including which objects must be geometrically simplified.

When installing the application, these parameters do not exist. They are created the first time that a line or polygon is displayed.

Here are the parameters to create if you want to do this manually:

- For lines:
  - cityportal.line.simplification.minScale: value between 1 and 12: the lines will be simplified between the logical scale of 12 and the specified logical scale,
  - cityportal.line.simplification.tolerance: value to set at 100.0 by default, this is the distance of tolerance for the simplification,
- For polygons:
  - cityportal.polygon.simplification.minScale: value between 1 and 12: polygons will be simplified betweenthe logical scale of 12 and the specified logical scale,
  - cityportal.polygone.simplification.tolerance: value to set to 10.0 by default, this is the tolerance distance for the simplification.

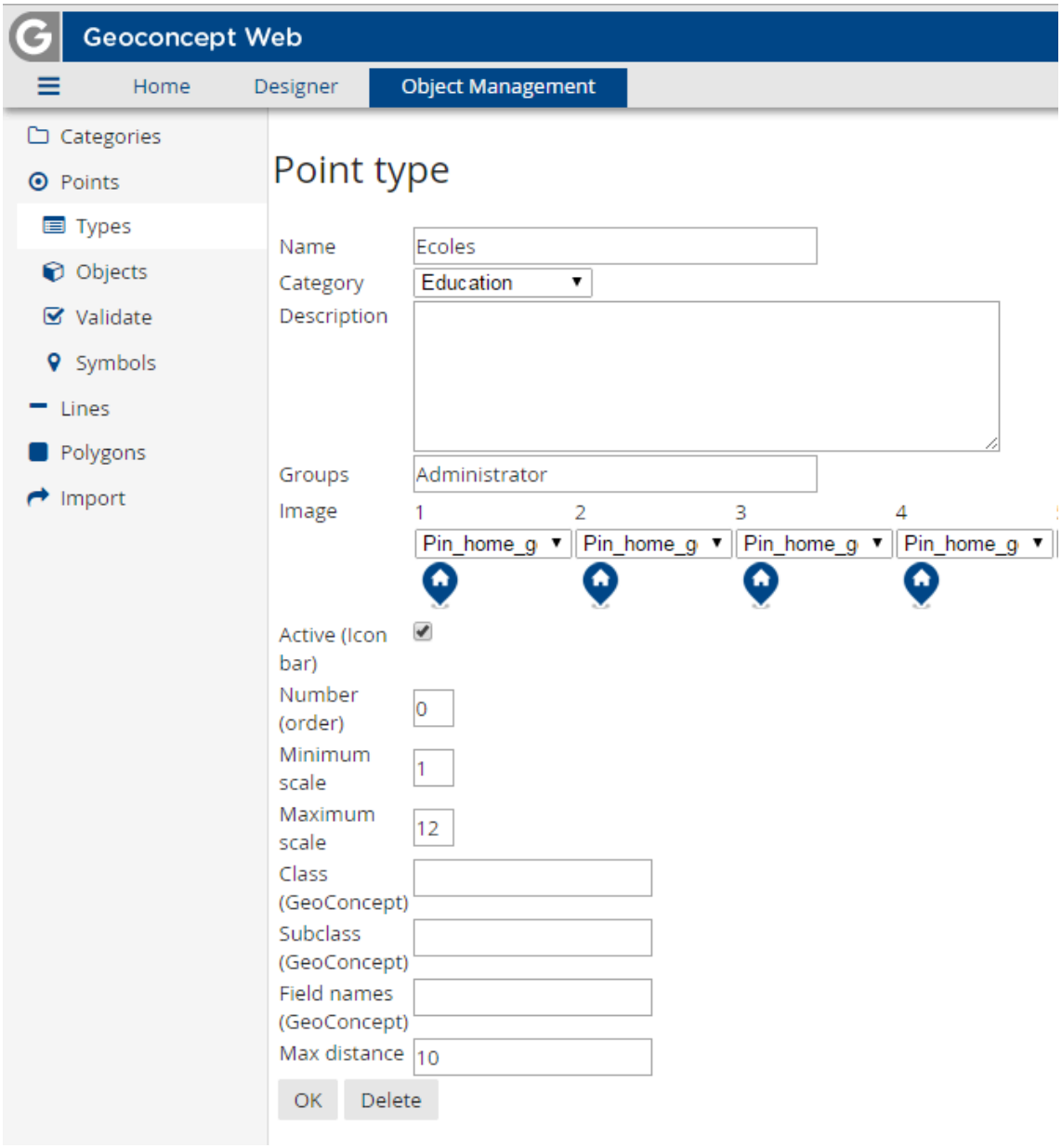
Once the WktGeometrySimplified field has been automatically filled by the application, this field is no longer modified by the application, even if the parameters are modified by the administrator.

To force the application to simplify the geometry again while taking into account the new parameters, it will be necessary to manually delete the field values for WktGeometrySimplified in the database for the objects in question. Next, display the objects in the mapping portal to enable recalculation of the simplified geometry values.

Authorise access to vector objects

It is possible to restrict access to the different types of vector objects by associating them to one or several groups. This configuration is applied in the page handling vector object types, for points, lines or polygons.

Assignment of a group for the Point1 Class



This means that a user who can see the Object list widget will only see objects of the Point1 type if they belong to group1. If the user does not belong to this group, they will not see these objects. The other selection or query widgets will also exclude this object Class when a search is performed.