CoGIS Portal Installing and setting

Manual on installing and setting CoGIS Designer and CoGIS SOE, CoGIS Portal and service for work of mobile applications CoGIS Mobile

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1. Preamble

This manual provides instructions on installing and primary setting of CoGIS Portal.

Instructions on installing and primary setting of CoGIS Server, which is a part of the CoGIS platform, are provided in the 'CoGIS Server - Installing and setting' manual.

Complete list of instructions on work with CoGIS platform components is provided in section 2.1 below.

2. System requirements

CoGIS Portal can be installed and used with the following operation systems:

- Windows Server 2012+
- Linux:
 - o Astra Linux
 - o RED OS
 - o Alt Linux
 - o Alpine 3.13+
 - o Debian 10+
 - o Ubuntu 16.04+
 - o Fedora 36+
 - o CentOS 7
 - o CentOS Stream Linux 8+
 - o RHEL 7+
 - o openSUSE 15+
 - o SUSE Enterprise Linux (SLES) 12 SP2+.

For proper work of CoGIS Portal, the NGINX, Apache, or IIS web server needs to be installed.

CoGIS Portal can be installed on the same server as the CoGIS Server and does not require additional computing resources.

2.1.Additional information

Additional information about CoGIS platform is provided in the following documents and manuals:

- General description of CoGIS platform, including description of CoGIS Server
- CoGIS Server Publishing GIS services
- CoGIS Server Installing and setting
- CoGIS Server Creating map projects in QGIS
- CoGIS Portal Creating map applications
- CoGIS Mobile Working in mobile applications.

3. Installing CoGIS Portal

3.1.Installing on Windows OS

3.1.1. Preliminary system setup

3.1.1.1. Internet Information Services (IIS)

For work of CoGIS Portal make sure that the IIS program components are installed in the system.

To do so, go to Windows Features (Windows components) of control panel:

Control Panel -> Programs and Features -> Turn Windows features on or off

J.	Programs and Features Uninstall a program 🛞 Turn Windows features on or off View installed updates
	Run programs made for previous versions of Windows How to install a program

If Internet Information Services and/or Internet Information Services Hostable Web Core components are turned off, turn them on as shown on Figure 1.

	Windows Features	-		×					
Turn Windo	ws features on or off			0					
To turn a feature on, select its check box. To turn a feature off, clear its check box. A filled box means that only part of the feature is turned on.									
🕀 🛄 Нуре	er-V			^					
🖌 🚺 Inter	net Explorer 11								
🗉 🗹 🚺 Inter	net Information Services								
🖌 🚺 Inter	net Information Services Hostable Web C	ore							
🛛 🕀 🛄 Lega	cy Components			~					
	ОК		Cano	el					
	OK		Cant						

Figure 1 – Turning on IIS program components

Then press OK. The program components will be installed.

3.1.1.2. .NET 6.0

For work of CoGIS Portal you also need to install .Net Core 6.0 (module *ASP.NET Core/.NET Core: Runtime & Hosting Bundle*).

To do so, follow the link at <u>https://dotnet.microsoft.com/download/dotnet-core/6.0</u> and download the installer as shown on Figure 2 below.

ASP.NET Core Runtime 6.0.16							
The ASP.NET Core Runtime enables you to run existing web/server applications. On Windows, we recommend installing the Hosting Bundle, which includes the .NET Runtime and IIS support.							
IIS runtime 16.0.23083	e support (ASP.NET Core Module v2) 3.16						
OS	Installers	Binaries					
Linux	Linux Package manager instructions Arm32 Arm32 Alpine Arm64 Arm64 Alpine x64 x64 Alpine Arm64 Alpine						
macOS	macOS <u>Arm64 x64</u>						
Windows	Windows Hosting Bundle x64 x86 winget instructions Arm64 x64 x86						

Figure 2 – Downloading .Net 6.0 (Hosting bundle) installer

3.1.2. Running installer

After setting up system for CoGIS Portal installation you can proceed with the installation itself. To do so, start **CoGIS.Portal.10.0.0000.En.msi**, and press *Next*, see Figure 3.



Figure 3 – Starting CoGIS Portal installer

3.1.3. End-user license agreement

At the next step of CoGIS Portal installation read the End-user license agreement, check the box to accept its terms and conditions and press Next, see Figure 4.

🕼 CoGIS 10.0.3927 Setup	_		×
End-User License Agreement Please read the following license agreement carefully	S	со	gis
END-USER LICENSE AGREEMENT			^
This End-User License Agreement ("Agreement Agreement between you ("Customer") and Data ("Licensor") for "CoGIS" software ("Software Pr accompanies this Agreement, including any assoc printed materials and electronic documentation. I Product also includes any software upda	a Eas roduc ciated The S	st, LLC t") that l media, oftware	
Print Back Next	:	Can	cel

Figure 4 – End-user license agreement

3.1.4. Installation folder

At this step specify installation folder for CoGIS Portal.

Press *Next* to install CoGIS Portal to the default installation folder, or *Change*, to select the other folder, see Figure 5.

🕼 CoGIS 10.0.3927 Setup			_		×
Destination Folder Click Next to install to the default folder or click C	hange to d	choose ano	ther	cog	gis
Install CoGIS 10.0.3927 to:					
C:\COGIS\ Change					
	Back	Next		Cance	ł

Figure 5 – Installation folder

Note: For your convenience you can install CoGIS Server and CoGIS Portal to one directory, for example, C:\COGIS\.

3.1.5. Applications parameters for IIS

At this step of CoGIS Portal installation specify applications names for Internet Information Services or keep the default names, see Figure 6.

🕼 Installing CoGIS 10.0.3927	_		×
Deploy to IIS		cog	vic
Enter IIS application names	Z	COG	15
WEB Application name			
cogis			
WEB Application name (mobile version)			
cogismobile			
CoGIS requires .NET 6.0 (module "ASP.NET Core Runtime: Hosting Bundle") to work			
https://dotnet.microsoft.com/download/dotnet/6.0			
Config Back Next		Cance	I

Figure 6 – Applications parameters for IIS

If needed, press *Config* to select site binding and press OK. By default, the Http option is selected, see Figure 7.

@ Config				×
Select binding	g type of IIS s	ite		
) Http	◯ Https	◯ Custom		
			ОК	

Figure 7 – Site binding

Press Next to get to the next step.

3.1.6. Installation

At this step, the CoGIS Portal installation will be done. Press *Install* as shown on Figure 8 to start the process.

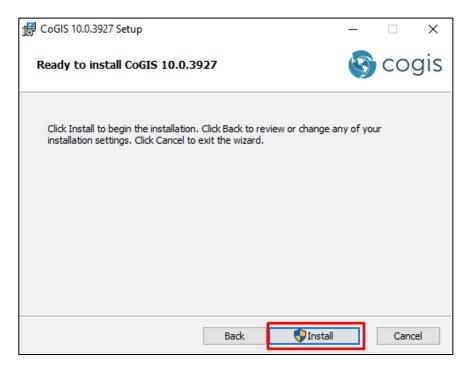


Figure 8 – Staring CoGIS Portal installation process

The progress bar showing the installation process will appear.

Upon CoGIS Portal installation completion, the appropriate message will appear.

3.1.7. Installing license

CoGIS license can be activated via command line (administrator mode) as following:

1. If you have Internet access, you can quickly activate your CoGIS license using the activation key and the following command:

dotnet C:\COGIS\COGIS.Licensing\CoGIS.Licensing.Console.Manager.dll
activate -k <activation-key> -a "C:\COGIS\COGIS.Licensing\CoGIS
10.0.appinfo"

2. If you do not have access to Internet, you will need to find out your Host ID via the following command:

dotnet C:\COGIS\COGIS.Licensing\CoGIS.Licensing.Console.Manager.dll host

Send the obtained Host ID and CoGIS purchase information to the license provider and request manual activation of your license. The file with the activated license will be forwarded to you; install this license with the following command:

```
dotnet C:\COGIS\COGIS.Licensing\CoGIS.Licensing.Console.Manager.dll
install -1 <license-file> -a "C:\COGIS\COGIS.Licensing\CoGIS 10.0.appinfo"
```

After the license installation, restart the CoGIS Portal service.

3.1.8. Primary setting and performance testing

3.1.8.1. Starting IIS

For primary setting and testing CoGIS Portal performance you need to start Internet Information Services (IIS) Manager first.

Press WIN+S to open the search field and enter IIS. In the search results list select Internet Information Services (IIS) Manager, and run the program, see Figure 9.

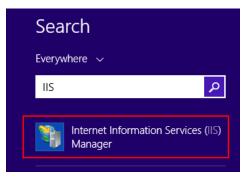


Figure 9 – Running IIS

Now make sure that server is started, otherwise, press Start, see Figure 10.

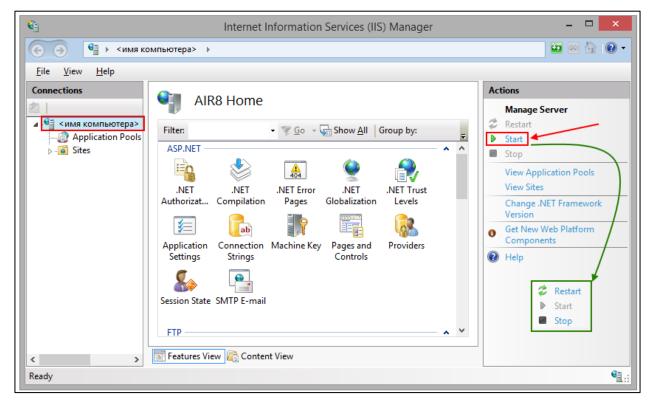


Figure 10 – Starting IIS server

Now make sure that Default Web Site is started, otherwise press *Start*, see Figure 11.

V j	Internet Informat	tion	Services (IIS) Ma	nagei	r		x			
<u>F</u> ile <u>V</u> iew <u>H</u> elp										
Connections Sites Actions										
▲ ····································	Filter:	■ Filter: <u>• ▼ G</u> o • _			View Applications View Virtual Directories					
⊿ 🙆 Sites	Name	ID	Status	Ma	nage Website	۲				
⊳ . 🏀 Default Web S	😭 Default Web Site	1 9	Stopped (http)			Crestart				
				┣	Stop	StartStop				
					Browse Webs	ite				
			•	Browse *:80 (ht	ttp)	-				
					Advanced Sett	ings	-			
					Configure	. .				
					Failed Request	Tracing				
	<		>		Add FTP Publis	shing	-			
< >	🔚 Features View 📳 C	onte	nt View	0	Help		-			
Ready							•			

Figure 11 – Starting Default Web Site

3.1.8.2. Setting and testing CoGIS Portal

For setting and testing CoGIS open CoGIS Portal from Internet Information Services (IIS) Manager, see Figure 12.

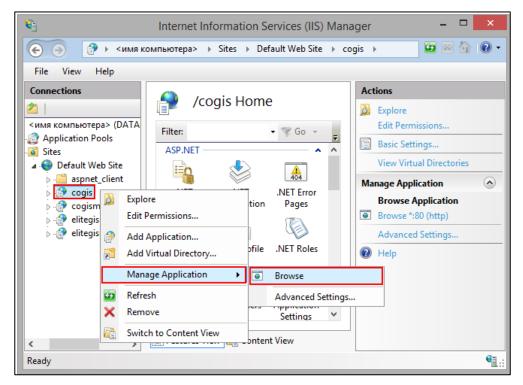


Figure 12 – Starting CoGIS from Internet Information Services (IIS) Manager

Now (at <u>http://localhost/portal</u>) CoGIS Portal tab will open. Press *Administration* and select *Settings* item in the drop down list, see Figure 13.

🐯 GIS application catalog CoGIS 🛛 🗙 🕂		~ <mark>- □ ×</mark>
\leftarrow \rightarrow C (i) localhost/cogis/catalog		🖙 🚖 🔲 😁 Окно в режиме инкогнито 🕴
Scogis Maps catalog		Pyc En 🛛 Login 🔞 🕯
		Designer
Q. Search		CoGIS SOE rules
		User accounts
		Files
		Services
		GIS server
		Mobile service settings
		Settings Settings
	Try to authorize to view maps catalog.	
localhost/cogis/admin/globalSettings		•

Figure 13 – Starting CoGIS Portal

In the *General settings* tab specify path to /eLiteGIS.SOE folder from directory with installed CoGIS Server.

Scogis Maps catalog			Pyc Eng Esp Login 🔅	
General settings	Site URI		http://vm-coqis-demo/coqis/	
User interface				
File storages	Internal site URL		http://vm-cogis-demo/cogis/	
Logging	Default database P		PostgreSQL 🗸	
Certificates			512000	
GIS servers list	Maximum loaded file size, KB		312000	
Administrator permissions	Folders			
Personal account, authorization and registration	SOE folder path		/eLiteGIS.SOE	
User accounts management	Mobile service folder path		/COGIS.Mobile	
Coordinate systems	✓ Use service to store links from the 'Share link to map' tool		e 'Share link to man' tool	
SMTP server				
Maintenance work	Service	http://vm-cogis-demo/elitegis/rest/services/temp_vanee		
Payment	Layer	1		

Figure 14 – General settings of CoGIS Portal

In the GIS servers list tab fill in the appropriate fields, see Figure 15:

- Public URL: http://<computername>/elitegis
- URL: <u>http://localhost/elitegis</u>
- Login: admin

• Password: admin.

General settings User interface File storages Logging Certificates	GIS servers : ГИС-сервер 🖉 Public URL Windows domain	http:// <computername>/elitegis</computername>	×
GIS servers list	Administration access		
Administrator permissions Personal account, authorization and registration User accounts management Coordinate systems SMTP server Maintenance work Раутелt Лицензирование	URL to REST API http://localhost/elite URL to manage http://localhost/elite Login Password Encrypt login and parts		\$

Figure 15 – Setting CoGIS Portal. List of GIS servers.

3.2.Installing on Linux OS

3.2.1. Setting up Windows environment for connection with Linux The following steps should be done:

Install PuTTY client, download installation package at https://www.putty.org/.

Install WinSCP client, download installation package at <u>https://winscp.net/eng/download.php</u>.

Create new connection to Linux in PuTTY: enter session name and press Save, see Figure 16.

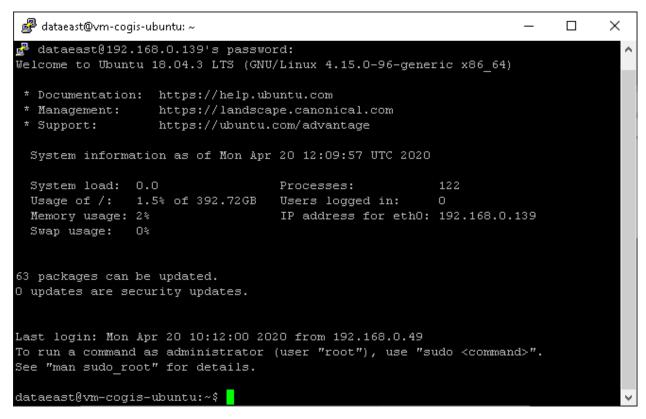
🕵 PuTTY Configuration		? ×	
Category:	Basic options for your PuTTY se Specify the destination you want to conne Host <u>N</u> ame (or IP address)		
Bell Features Window Appearance Behaviour	192.168.0.139 Connection type: ○ Raw ○ Ielnet □ Load, save or delete a stored session	22 I O Serial	
 Behaviour Translation Selection Colours Connection Data Proxy Telnet Rlogin SSH Serial 	Sav <u>e</u> d Sessions Default Settings WinSCP temporary session build-linux	Load Sa <u>v</u> e	
	Close window on e <u>x</u> it: O Always O Never	Delete	
<u>A</u> bout <u>H</u> elp	<u>O</u> pen	<u>C</u> ancel	

Figure 16 – Creating new connection to Linux in PuTTY

To open connection press *Open* and enter login and password in the appeared window, see Figure 17 and Figure 18.



Figure 17 – Opening connection in PuTTY: entering login





Same way connect to Linux via WinSCP, see Figure 19 and Figure 20.

퉖 Login	- 🗆 X
 New Site build_centos Build-CentOS centos dataadmin@192.168.10.10 dataeast@dev dataeast@dev-root minzdrav nche@192.168.0.62 	Session File protocol: SFTP Host name: Port number: 192.168.0.139 User name: Password: dataeast Save T Advanced T
Tools v <u>M</u> anage v	🔁 Login 🔽 Close Help

Figure 19 – Connecting to Linux via WinSCP (1)

🎦 publish - dataeast@192.	168.0.139 - V	VinSCP						-	
<u>L</u> ocal <u>M</u> ark <u>F</u> iles <u>C</u> omm	ands <u>S</u> essio	n <u>O</u> ptions <u>R</u> emote <u>I</u>	<u>H</u> elp						
🖶 器 📮 Synchronize	🗩 🦑 🗟] 🚳 📦 Queue 🗸	Transfer Settings Def	ault	• 🍠 •				
📮 dataeast@192.168.0.139	× 💣 Ne	w Session							
🏪 C: Local Disk 💿 🝷 🚰	- 🛛 -	← - → - 🗈 🖸	🏠 🎜 😘		📘 🔤 dataeast 🔹 🚰 🔹 🚺	7	» - 🗈 🖻 🏠 🎜	🔍 Find Files	2
🕼 Upload 👻 📝 Edit 👻	× nh Ba	Properties 🚰 New	• + - V		👔 🔐 Download 👻 📝 Ed				
:\etc\src\Tests\eLiteConsol		1			/home/dataeast/				
Name	Size	Туре	Changed		Name	Size	Changed	Rights	Owner
L .		Parent directory	19.02.2020 13:52:24		±		20.04.2020 14:04:13	nwxr-xr-x	root
runtimes		File folder	17.02.2020 14:33:52		-				
Atemiko.eLiteMap.dll	813 KB	Application exten	18.02.2020 12:42:40						
eLiteConsole.dll		Application exten	19.02.2020 12:17:29						
JeLiteConsole.deps.json	2 KB	JSON File	19.02.2020 12:17:30						
JeLiteConsole.runtime	1 KB	JSON File	19.02.2020 12:17:30						
a eLiteConsole.pdb	2 KB	Program Debug D	19.02.2020 12:17:29						
carrymap.so	30 067 KB	SO File	19.02.2020 13:51:19						
B of 30,1 MB in 0 of 7					0 B of 0 B in 0 of 0				6 hid
Command >									21114
Sommana 2									

Figure 20 – Connecting to Linux via WinSCP (2)

3.2.2. Setting up Linux before installing CoGIS Portal

The following steps should be done to set up Linux before installing CoGIS Portal:

To update system in Ubuntu / Debian / Astra Linux / Alt Linux OS run the following commands:

```
sudo apt-get update
sudo apt-get upgrade
```

To update system in Red OS / CentOS 7 run the following command:

sudo yum update

To update system in CentOS Stream 8 / CentOS Stream 9 run the following command:

```
sudo dnf update
```

3.2.3. Installing ASP.NET Core Runtime

Below are the commands to be run to install asp.net core runtime depending on OS.

To install **asp.net core runtime** in Ubuntu 22.04:

sudo apt-get install aspnetcore-runtime-6.0

To install **asp.net core runtime** in Ubuntu 20.04:

sudo apt-get install wget

wget https://packages.microsoft.com/config/ubuntu/20.04/packagesmicrosoft-prod.deb -0 packages-microsoft-prod.deb

```
sudo dpkg -i packages-microsoft-prod.deb
rm packages-microsoft-prod.deb
```

```
sudo apt-get update
sudo apt-get install aspnetcore-runtime-6.0
```

To install asp.net core runtime in CentOS 7:

sudo rpm -Uvh https://packages.microsoft.com/config/centos/7/packagesmicrosoft-prod.rpm sudo yum install aspnetcore-runtime-6.0

To install asp.net core runtime in CentOS Stream 8 / CentOS Stream 9:

sudo dnf install aspnetcore-runtime-6.0

To install **asp.net core runtime** in Astra Linux Common Edition:

sudo wget https://packages.microsoft.com/config/debian/9/prod.list -0
/etc/apt/sources.list.d/microsoft-prod.list

sudo apt-get update
sudo apt-get install aspnetcore-runtime-6.0

To install **asp.net core runtime** in Alt Linux / Alt Server:

sudo apt-get install dotnet-aspnetcore-runtime-6.0

To install **asp.net core runtime** in Red OS:

sudo yum install aspnetcore-runtime-6.0

3.2.4. Installing NGINX

Below are the commands to be run to install NGINX depending on OS.

To install NGINX in Ubuntu / Astra / Alt Linux:

sudo apt-get install nginx

To install **NGINX** in Red OS:

sudo yum install nginx

To install **NGINX** in CentOS 7:

sudo yum install epel-release
sudo yum update
sudo yum install nginx

To install NGINX in CentOS Stream 8 / CentOS Stream 9:

sudo dnf install nginx

3.2.5. Setting NGINX

In order to set *reverse proxy* in NGINX, you need to build configuration and redirect requests to the appropriate CoGIS components. To do so, the following steps should be done:

To create configuration in Ubuntu / Astra:

```
sudo nano /etc/nginx/sites-available/reverse-proxy.conf
```

To create configuration in Alt Linux / Alt Server:

sudo nano /etc/nginx/sites-available.d/reverse-proxy.conf

To create configuration in Red OS / CentOS 7 / CentOS Stream 8 / CentOS Stream 9, delete or comment **server** section **/etc/nginx/nginx.conf** file and create the following configuration file:

```
sudo nano /etc/nginx/conf.d/reverse-proxy.conf
```

Content of reverse-proxy.conf file is as following (replace **SERVERNAME** value with the full name of your server in network):

```
server {
listen 443 ssl;
access_log /var/log/nginx/reverse-access.log;
error_log /var/log/nginx/reverse-error.log;
  server_name SERVERNAME localhost;
ssl_certificate /etc/nginx/ssl/cert.crt;
ssl_certificate_key /etc/nginx/ssl/cert.key;
client_max_body_size 100M;
location / {
          return 301 /portal/;
}
  location /elitegis/ {
          proxy_pass http://127.0.0.1:5000/;
          include proxy_params;
}
     location /portal/ {
           proxy_pass http://127.0.0.1:5001/;
          include proxy_params;
}
     location /elitegismanager/ {
          proxy_pass http://127.0.0.1:5002/;
```

```
include proxy_params;
}
location /mobile/ {
    proxy_pass http://127.0.0.1:5003/;
    include proxy_params;
}
```

For RedOS / CentOS 7 / CentOS Stream 8 / CentOS Stream 9 create **/etc/nginx/proxy_params** file with the following content:

proxy_set_header Host \$http_host; proxy_set_header X-Real-IP \$remote_addr; proxy_set_header X-Forwarded-For \$proxy_add_x_forwarded_for; proxy_set_header X-Forwarded-Proto \$scheme;

To copy link to the new configuration in Ubuntu / Astra:

sudo ln -s /etc/nginx/sites-available/reverse-proxy.conf /etc/nginx/sitesenabled/reverse-proxy.conf

To copy link to the new configuration in Alt Linux / Alt Server:

```
sudo ln -s /etc/nginx/sites-available.d/reverse-proxy.conf
/etc/nginx/sites-enabled.d/reverse-proxy.conf
```

In Red OS / CentOS 7 / CentOS Stream 8 / CentOS Stream 9, copying link to configuration is not needed, but you need **to allow nginx to access other services**:

```
setsebool -P httpd_can_network_connect 1
```

Now reload NGINX:

sudo nginx -s reload

3.2.6. Installing CoGIS Portal

After all the preliminary steps you can proceed with CoGIS Portal installation as follows:

Connect to Linux via WinSCP.

Copy packages as shown on Figure 21.

🌆 Distrib - 192.168.0.139 - WinSCI	°D.							×
						-	Ш	×
Local <u>M</u> ark <u>F</u> iles <u>C</u> ommands <u>:</u>		- ·						
🖶 🔁 📚 Synchronize 🗾 🚽		Transfer Settings Default	• 💋 •					
📮 192.168.0.139 🗙 🚅 New Se								
] • 💠 • 🔿 • 🔁 🔽		📙 dataeast 🔹 🚰 💌 🝸				20	
📑 🕼 Upload 👻 🃝 Edit 👻 🥁	🔏 🕞 Properties 📑 New	• + - V	📲 🔐 Download 👻 📝 Edit	- X 🚽	🔓 Properties 🛛 🚰 New	/ • 🛨 🗖 💆		
D:\Distrib\			/home/dataeast/					
Name <u>e.</u> cogis_8.0.2822_x86_64 18 85 <u>elitegis_8.0.761_x86_6</u> 67 27	Size Type Parent directory 55 KB DEB File 70 KB DEB File	Changed 21.04.2020 11:49:02 20.04.2020 15:42:09 21.04.2020 9:41:37	Name	18 855 KB		Rights nwcr-xr-x nw-nw-r nw-nw-r	Owner root dataeast dataeast	
0 B of 84,1 MB in 0 of 2 Command >			0 B of 84,1 MB in 0 of 2			SFTP-3	8 h 0:02:	idden • 11 .:

Figure 21 – Copying packages

Go to PuTTY and start installation as following:

```
sudo dpkg -i cogis.portal.10.0.0000_x86_64.deb
```

When installing on Alt Linux / Alt Server, the additional parameter 'force-all' needs to be used to ignore dependencies:

```
sudo dpkg --force-all -i cogis.portal.10.0.0000_x86_64.deb
```

Now carry out the initial configuration of the Portal by running the script, see Figure 22:

sudo /usr/cogis/setup



Figure 22 – Configuring CoGIS Portal

For fine tuning use the following command:

sudo nano /usr/cogis/frontend/App_Data/settings.xml

3.2.7. Installing license

CoGIS license can be activated as following:

3. If you have Internet access, you can quickly activate your CoGIS license using the activation key and the following command:

```
sudo dotnet /usr/cogis/licensing/CoGIS.Licensing.Console.Manager.dll
activate -k <activation-key> -a /usr/cogis/licensing/CoGIS\ 10.0.appinfo
```

4. If you do not have access to Internet, you will need to find out your Host ID via the following command:

```
sudo dotnet /usr/cogis/licensing/CoGIS.Licensing.Console.Manager.dll host
```

Send the obtained Host ID and CoGIS purchase information to the license provider and request manual activation of your license. The file with the activated license will be forwarded to you; install this license with the following command:

```
sudo dotnet /usr/cogis/licensing/CoGIS.Licensing.Console.Manager.dll
install -1 <license-file> -a /usr/cogis/licensing/CoGIS\ 10.0.appinfo
```

After the license installation, restart the CoGIS Portal service via the following command:

```
sudo systemctl restart cogis
```

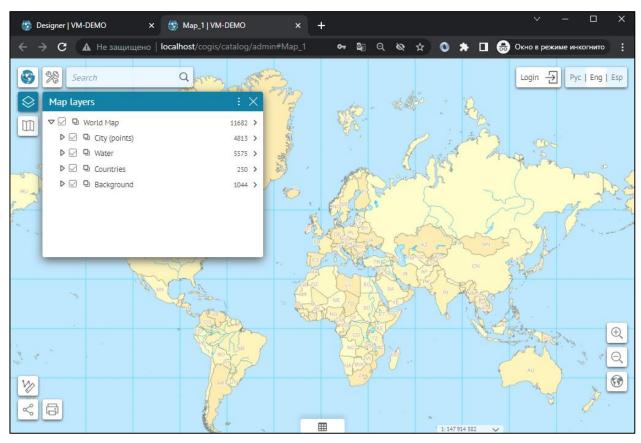
3.3.Checking out work of the test map

Now check the work of published web map service in CoGIS Portal, see Figure 23:

- Go to CoGIS Designer (1)
- Add online map (2)
- In Services tab (3) press Add service -> Map service (4)
- To the URL line paste the WorldMap service address copied from CoGIS ServerManager
 (5)
- Save the map (6)
- Open the map (7)

🚱 Designer CoGIS 🛛 🔿	× +	↓ <u> X</u>
← → C (i) localhost/cogis	s/catalog/admin#Map_1	🕶 🔍 🛧 🔲 🌧 Окно в режиме инкогнито 🕴
Maps catalog	🗉 🚱 cogis	Pyc En Login
Administration Designer	Search 2	ID Map_1 Name Map_1 □ □ □
CoGIS SOE rules 1	Root folder	Версия 1 🔁 🕂 4
User accounts	🖾 Мар_1 🥏	Add service Expand all Collapse all
Files	3	General map services (1)
GIS server	1	
Mobile service settings		
Settings		Data III Map 😂 Legend 🔍 Search 🚍 Identify card 🏢 Attribute table
		Time extent from <i>not specified</i> till <i>not specified</i>
		Do requests with geometry
		□ J Hide objects if filter is not specified S Layers
		Was case insensitive search and filtration

Figure 23 – Opening map based on web map service published in CoGIS Server



Example of correctly opened map is shown on Figure 24.

Figure 24 – Viewing published map in web browser

Checking out is finished.

4. Setting CoGIS Portal

4.1.Setting CoGIS Portal. General information.

After installing CoGIS Portal, it should be set. To do so, in Administration menu select General settings. The settings page shown on Figure 25 will appear. The navigation tabs are located in the left part of the settings window. All CoGIS Portal settings are specified on this page.

Scogis Maps catalog	Pyc Eng Esp Login {						
General settings	Site URL		http://vm-o	Designer			
User interface	Internal site URL		http://vm-o	CoGIS SOE rules			
File storages Logging	Default database		PostgreSOl	User accounts			
Certificates	Maximum loaded file		512000	Files			
GIS servers list	Folders	e 512e, KD	512000	Services			
Administrator permissions Personal account, authorization and registration	SOE folder path		/eLite(GIS server			
User accounts management	Mobile service fo	lder path		Mobile service settings			
Coordinate systems	✓ Use service to store links from the 'Shar			Caulana			
SMTP server	_			Settings			
Maintenance work	Service	http://vm-cogis-de	emo/elitegi:	s/rest/services/ lemp_vaneb v/ServerL			
Payment	Layer	1					

Figure 25 – CoGIS Portal settings page

4.2.Connection to GIS server

4.2.1. Connection to GIS server. General information.

You need to establish connection to GIS server where maps and other services are published. Services are used for work with online and offline maps. After establishing connection to GIS server, you will be able to:

Authorize CoGIS Portal user on GIS server, get token to build requests to services of GIS server;

- Get list of authorized users and user groups from GIS server, based on which CoGIS Portal elements' access rules are specified;

- Register CoGIS Portal user on GIS server;
- Change registration parameters of CoGIS Portal users on GIS server;
- Get list of services of GIS server, run and stop them, update service extensions.

To connect to GIS server, go to GIS servers list shown on Figure 26.

Scogis Maps catalog				Pyc Eng Es	sp Logi	n 🔯
General settings User interface File storages	GIS servers 🕀 : ГИС-сервер 🖉	,				2
Logging Certificates	Public URL Windows domai	in	http://vm-o	cogis-demo/elitegis		(
GIS servers list	Administration	access to REST API				
Administrator permissions Personal account, authorization and registration		p://vm-cogis-dem	10/elitegis		()	
User accounts management Coordinate systems		. to manage :p://vm-cogis-dem	10/elitegisma	nager	()	
SMTP server Maintenance work	Log			admin		
Payment	_	sword Encrypt login and	password by	saving settings.		Ø
		Portal for ArcGIS				



Establish connection between web server where CoGIS Portal is deployed and GIS server. To do so, enter GIS server address to the *URL* field. This address can be available only within server infrastructure web server–GIS server. GIS server will receive and process users' requests. For example, to registered user GIS server will assign token based on which the user will further get responses to his requests.

To authorize account of GIS server administrator, enter login and password. If you want that login and password will not be explicitly displayed on this tab and saved, cipher it, checking *Encrypt login and password by saving settings* option. Encrypted data is stored in XML file of CoGIS Portal settings on web server.

If in the selected IIS service *Windows authorization* has been specified as web server, enter the Windows domain name of your network.

For work with online and offline maps in *CoGIS Designer* you will need services. To build requests to services, in *Public URL* field enter address of GIS server where these services have been published. To avoid possible errors, make sure that address of service mentioned in *CoGIS Designer* contains the address of GIS server specified here, for example, as shown on Figure 27.

			Adm	ninistr	ration/Settings			
	🚱 cogis	Maps cata	alog			Pyc Eng Esp	Login 🔯	
	General settings User interface File storages Logging Certificates GIS servers list				ervers 🕁 GIS server 🖉 Public URL Windows domain Administration access	http://vm-cogis-demo/elitegis	×	
3	COGIS Map	s catalog	I	Makin	ng settings in CoG	IS Designer	Pyc Eng Esp	Login 🔯
C7 (Searc		~ ☆ ×		ID Map	0_11	Name Louisiana	$\bigcirc \blacksquare \ni$	
	ochagochkina	•		EN	♪ ⊕			
	🛱 Louisiana	0	=		Add service		Expand all	Collapse all
			₿ B		map services (2)		TS & XNLJ	00
			Ē		url http://vm-cogis-demo/e	elitegis, rest/services/temp_ochagochki		
			1		Data Map	Legend 🔍 Search 📃 Identify card	Attribute table	
			F		\Box ∇ SQL filters \oplus			

Figure 27 – Including address of GIS server to address of service

For debugging purposes you can establish connection to multiple GIS servers. When setting users authorization and registration and managing administration access rights, make sure to specify GIS server for which these settings will be applied. To do so, in *Administrator permissions* and *Personal account, authorization and registration* tabs select GIS server in the drop-down list, as shown on Figure 28.

Adm	ninistration/Settings		
Scogis Maps catalog		Pyc Eng Es	p Login ۞
General settings User interface File storages Logging Certificates GIS servers list	GIS server Designer 🔶 Edit Sandbox Folder SandBo	GIS server GIS server GIS server_demo	^ ~ X
Administrator permissions Personal account, authorization and registration User accounts management Coordinate systems SMTP server Maintenance work	Catalog viewing Access permissions (View CoGIS SOE rules (Edit User accounts ()	All	~ × ~ ×
Payment	Edit	✓ All	~ ×

Figure 28 – Selecting GIS server

4.2.2. Restoring password for administrator accounts

If you cannot login under administrator account after ciphering login and password, you will need XML file of settings stored on web server. In this XML file delete the line with encryption and enter the line with login and password. See Figure 29 with location of this line.

Delete:

<encryptedCredentials>шифp</encryptedCredentials>

Enter:

<login>enter login</login>

<password>enter password</password>

Выделенную строчку	
<admin loadallgroups="false" url="http://localbost/arcois"></admin>	
<pre><encryptedcredentials>Q3B/9yGfdu1csPhoLKkxWxP4sNqhavbMzrVX/Y+uI8cvK9KJskEuQ</encryptedcredentials></pre>	5itaBGi3SLo
<pre><isportalforarcgis>Talse</isportalforarcgis> <groupscheck></groupscheck></pre>	
Замените на:	
<admin_url="http: arcois"="" loadallgroups="false" localhost=""> <login>sneame.com.sonm</login></admin_url="http:>	
<pre><pre>cpassword> meture mapons</pre>/password> <isportalforarcgis>false<!--/sPortalForArcGIS--></isportalforarcgis></pre>	
<groupscheck></groupscheck>	



4.3. Managing access to web portal administration

By default administration of web portal is allowed to any user.

Administration menu consists of the following items:

- *CoGIS Designer* provided for creation of main elements of CoGIS Portal. The CoGIS Designer description is provided in section *Basic principles of work in CoGIS Designer* of the *CoGIS Creating map applications* manual.
- Sandbox provided for access to CoGIS Designer. At that in the sandbox the user gets access to his/her maps only, the option of changing settings for maps of the other users is not provided.
- *SOE rules* provided for extending functionality of map service. See details in *Service objects extension* section of the *CoGIS Creating map applications* manual.
- User accounts provided for managing accounts of users and user groups. See details in Managing user accounts section of the CoGIS - Creating map applications manual.
- *Files* provided for managing files. See details in *Managing files* section of the *CoGIS Creating map applications* manual.
- Services provided for SOE installation and update, as well as for managing GIS server services.
- Settings.

Specify access rights to *Administration* menu items in *Administrator permissions* tab. For one item you can specify different access rights.

Specify access rights to:

- Page view;
- Settings editing.

You can specify access rights for group of users or for separate user. To do so, select the needed variant from the drop-down list and enter the group or the user's name. For example, Figure 30 shows settings when CoGIS Designer is available for viewing to all authorized user, and editing rights are given to one user only.

Ac COGIS Maps catalog	dministration/Settings	Pyc En	g Esp Қаз 🔗	\$
General settings User interface	GIS server	GIS server 🗸		_
File storages	Designer 🕀			_
Logging	Edit ~	User group 🗸	admins	×
Certificates	Edit 🗸	User group 🗸 🗸	publishers	×
GIS servers list	View	User group 🗸	watchers	×
Administrator permissions	Sandbox			
Personal account, authorization and registration	Folder Обучение (Пе	сочница) 🗸)	
User accounts management	Catalog viewing			
Coordinate systems	Access permissions (+)			
SMTP server				×
Maintenance work	Edit 🗸	User group 🗸	students	\sim
Payment	CoGIS SOE rules \oplus			



List of users registered or authorized on web portal is stored in a table with appropriate fields published as map service on GIS server.

4.4.Logging

For debugging of web portal, define which actions need to be recorded and specify location of the file where these records will be stored. To do so, go to *General settings* tab, *Logging* section. Set the file size limitation, see example on Figure 31. To allow users to see errors arising during the work, check *Show errors* option. To record users activity, specify frequency of transferring this information to web server where CoGIS Portal is installed.

Administration/Settings						
S COGIS Maps catalog			Pyc Eng Esp Kaa 💍 🔅			
General settings User interface File storages	Logging	Size limit (MB)				
Logging	Sessions	0				
Certificates	Actions	0				
GIS servers list	Errors	0				
Administrator permissions	🔽 Debugging	10				
Personal account, authorization and registration User accounts management	Activities	0	Frequency (sec) 60			
Coordinate systems	Show errors					
SMTP server Maintenance work	Log to database					
Payment	Service	http://vm-cogis-demo/eli	tegis/rest/services/stats/MapServer			
Licensing	Sessions	4				
	Actions	5				
	Detail settings(\oplus				

Figure 31 - General settings tab, Logging section

4.4.1. Recording to database

The ability to log user sessions/actions and write them to the database allows you to control users and visit statistics in more detail. To take advantage of this opportunity, in Logging tab check *Log to database* option and specify the needed settings, see example on Figure 32.

A	dministrati	on/Settings	
S COGIS Maps catalog			Pyc Eng Esp Kaa 🗴 🔅
General settings	_		
User interface	Log to database	2	
File storages	Service	http://vm-cogis-demo	/elitegis/rest/services/stats/MapServer
Logging	Sessions	4	
Certificates			
GIS servers list	Actions	5	
Administrator permissions	Detail settings	\oplus	
Personal account, authorization and registration	: Logging	level	Pages transition and authorization/registration \checkmark X
User accounts management	User typ	e	For all authorized users
Coordinate systems	Maps (Ð	
SMTP server			
Maintenance work			
Payment			
Licensing			

Figure 32 - Setting Log to database option to log user sessions/actions

To be able to log user sessions/actions and write them to the database, the following default settings need to be specified:

1) To record events, specify layers of map service in *Sessions* field, and to record user actions specify layers of map service in *Actions* field.

To do so, first you need to prepare and publish map service using the GIS server, this map service should contain the following tables:

- cogis_logs_actions for logging user actions, see example on Figure 33 and in Table 1;
- cogis_logs_sessions for logging user sessions, see example on Figure 34 and in Table 2.

👎 pgAdmin 4	- 🗆 X
File Object Tools Help	
Object Explorer 🗣 🌐 🖬 🖉 >_	Dashboard Properties SQL Statistics Dependencies Dependents Processes 🌐 public.cogis_lo
<pre>> @ Foreign raises > (@ Functions > @ Materialized Views > @ Operators > (() Procedures > 1.3 Sequences > @ Tables (11) > @ cogis_logs_actions > @ cogis_logs_sessions > @ cogis_user_links > @ elitegis_auth_groups > @ elitegis_auth_tokens > @ elitegis_auth_users</pre>	<pre>1 Table: public.cogis_logs_actions 2 3 DROP TABLE IF EXISTS public.cogis_logs_actions; 4 5 CREATE TABLE IF NOT EXISTS public.cogis_logs_actions 6 (7 oid integer NOT NULL DEFAULT nextval('cogis_logs_actions_oid_seq'::regclass), 8 session_uid character varying(255) COLLATE pg_catalog."default", 9 item_id character varying(255) COLLATE pg_catalog."default", 11 action_type character varying(255) COLLATE pg_catalog."default", 12 context_value character varying(255) COLLATE pg_catalog."default", 13 service_url character varying(255) COLLATE pg_catalog."default", 14 create_date timestamp without time zone,</pre>
 integls_dull_users integls_dull_users integls_dull_users integls_changed_extent_log integls_changed_e	<pre>15 last_updated_date timestamp without time zone, 16 layer_id integer, 17 layer_name character varying(255) COLLATE pg_catalog."default", 18 CONSTRAINT cogis_logs_actions_pkey PRIMARY KEY (oid) 19) 20 21 TABLESPACE pg_default; 22</pre>
> (Types > (Yuews (4)	ALTER TABLE IF EXISTS public.cogis_logs_actions OWNER to postgres;

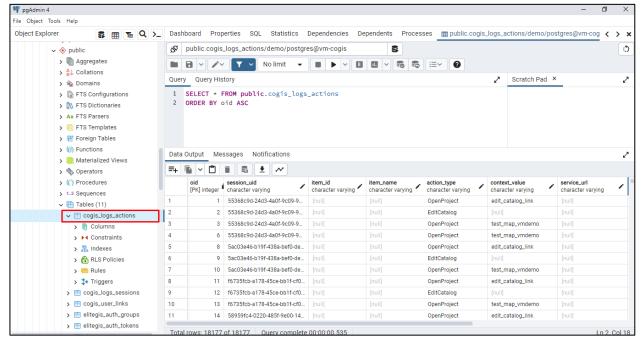


Figure 33 – Example of cogis_logs_actions table for logging user actions to PostgreSQL/PostGIS database

ile Object Tools Help
Object Explorer 🛛 🕏 🏢 🚡 🔍 >_
Object Explores > (i) Functions > (ii) Functions > (iii) Functions > (iiii) Procedures > (iiii) Procedures > (iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii

🕴 pgAdmin 4							- 0	>
le Object Tools Help								
Object Explorer 🛛 🕏 🏢 🚡 🔍 >	Dash	board Prope	rties SQL Statistics Dependenc	ies Dependents Processes 🏢 p	ublic.cogis_lo	g public.cogis_logs_	sessions/c < ゝ	•
✓ ♦ public	₿ B	public.cogis_l	ogs_sessions/demo/postgres@vm-co	ogis 🕏				1
> 🐚 Aggregates			No limit 👻 🔳 🕨	I I I < \$ \$ \$ I =	0			
> A B↓ Collations								
> 🏠 Domains	Quer	y Query Histo	ory		2	Scratch Pad ×		
> B FTS Configurations	1	SELECT * FR	OM public.cogis_logs_sessions	3				
> 🕅 FTS Dictionaries	2	ORDER BY of	d ASC					
> Aa FTS Parsers								
> 💿 FTS Templates								
> 暗 Foreign Tables								
> (iii) Functions	Det.	0.1.1.1.1.1.1.1	A1-A161					
> 🔯 Materialized Views	Data	Output Mess	ages Notifications					
> 勢 Operators	=+		i 🗟 🛓 🛩					
> (() Procedures		oid	uid	client_id	client_ip	client_device	user_login	
> 13 Sequences	·	[FK] Integel	character varying	character varying	character varying	character varying	character varying	
✓ I Tables (11)	1	3	4f960213-c907-4ce2-97d0-2ead15aba9c0	9da9c91e-a6eb-43e0-b508-732176a931	-01			
✓	2	4	0778f834-f49c-4f7e-a8cb-4613c942a440	2282706e-3710-4337-a09c-5ca464d2e0	01			
> 隫 Columns	3	5	2c124224-b431-4608-aed1-0176c45ffd0a	fa9c4ebd-9c99-41ee-8c9d-19e3a76ffc87	127.0.0.1			
> > Constraints	4	6	c84a4db1-3c3d-46eb-90a8-c123d23ac7	8aceb295-3203-4d28-ad3c-823df58b780b	::1			
> 🤼 Indexes	5	7	aa70bd712acb4c24ab0b78a435cfcb58		192.168.0.52			
> 🔂 RLS Policies	6	8	9fe66276-ea90-4826-9ab7-6dda73652b	055bb1b5-210b-4cce-a73f-050298ac6e96	-01			
> 🥽 Rules	7	9	e035a9be52b8402b96b752c943e78730	0E78864A-8EB1-413D-8BCC-56623ACB	192.168.0.52	iPhone12,1		
> 🛟 Triggers	8	10	ea8b6ad9-2960-4fb9-82b9-55449ae851	a6731da2-bf4d-4438-a647-3bfc994c6add	192.168.0.32			
> 🗄 cogis_logs_sessions	9	11	836bc07f-d672-47de-819a-c2b934a1a0	a3a7205f-1b61-4354-92bc-8c8572644e7c	192.168.0.85			
> 🛅 cogis_user_links	10	12	836bc07f-d672-47de-819a-c2b934a1a0	a3a7205f-1b61-4354-92bc-8c8572644e7c	192.168.0.85		a1	
> 🗎 elitegis_auth_groups	11	14	3e3e5cbf-e8c0-480f-85b3-997fb086e53d	11178f4b-e8a5-493e-bdfd-56fa1fabdaff	:1			
> 📑 elitegis_auth_tokens			1379 Query complete 00:00:00.295					

Figure 34 - Example of cogis_logs_sessions table for logging user sessions to PostgreSQL/PostGIS database

- 2) Add and set up Edit plugin with administrator rights for corresponding map service layers, see details in section 12. SOE rules / 12.4.Editing objects. Edit plugin of the CoGIS Creating map applications manual.
- 3) In *Detail settings Logging level* select the variant of setting the logging level from the drop-down list, see Figure 35. The logging level depends on the purpose of recording events / actions in the database:

o *Pages transition* - the possibility of accumulating general statistics of visits by maps popularity;

Authorization/registration - logging entries in all elements of the catalog, on the administrator pages, as well as information about the facts of authorization / registration;
 + Data editing - collection of information about editing objects: which user, where

+ Data editing - collection of infor and what edits;

• *Hain user actions on map* - allows you to evaluate which map functions are more in demand among users: identification, search, run geoprocessing tool, generate report, select basemap, enable swipe tool, manage layers visibility (legend, drop-down list, switch), open widget, view layer in attribute table, zoom to full extent, etc.;

o *All actions* - details of user actions when working with interactive map, for example, opening window with list of geoprocessing tools, zoom in/zoom out, edit geometry on map, etc.

Detail settings \oplus			
Logging level	Pages transition and authorization/registration	~	×
User type	For all authorized users	~	
Maps 🕀			

Figure 35 – Setting logging details to log user sessions/actions in database

- 4) In *User type* select for which users or user groups the logging settings will be applied.
- 5) In Maps press \bigoplus and specify maps to which the logging settings will be applied.

Details of default settings based on logging data in the database to record the events/actions performed by users are provided in Table 1 and Table 2.

Table 1 – Logging user actions in cogis_logs_actions layer of map service

Attribute field in layer	Portal	Mobile service
session_uid	::userCookield	::Session
item_id	::mainParameter Logging map name ID	::Map Logging map name ID
item_name	Name of element from catalog	Name of element from catalog
action_type	 ::actionType Examples: Open project OpenProject Open Maps catalog GetCatalogItem Open layer attribute table OpenAttributeTableLayer Add object addObject; Update object updateObject etc. 	 ::Method <i>Examples:</i> Open project OpenProject Open Maps catalog GetCatalogItem Open layer attribute table OpenAttributeTableLayer Add object addObject; Update object updateObject etc.

Attribute field in layer	Portal	Mobile service
context_value	- widget name; - search string; - coordinates by object's identification	Logging useful context, for example: - widget name; - search string; - coordinates by object's identification in "X,Y,wkid" format
	ApplyEdits, AddAttachment and	Logging service url by selection of ApplyEdits, AddAttachment and GetObjectDetails
layer_id	Number of layer id	Number of layer id
layer_name	Layer name	Layer name

Table 2 - Logging user sessions in cogis_logs_sessions layer of map service

Attribute field in layer	Portal	Mobile service
uid	::userCookieId	::sessionId
client_id	::browserCookieId	::deviceId
client_ip	::IP	::clientIP
client_device	Web client is not logged	::deviceModel Examples: • for iOS "iPhone12,1"; • for Android "M2007J20CG".
user_login	::Username User login (without suffix), including string update after authorization	::Username User login (without suffix), including string update after authorization
user_auth_provider	Authorization provider (user login suffix) of the current login	Authorization provider (user login suffix) of the current login
os_name	Taken from parameter ::Headers["User-Agent"] OS examples: Windows, Linux, Mac, Android, iOS	::clientType OS examples: Android, iOS
os_version	Taken from parameter ::Headers["User-Agent"] OS examples: 10.0, X11, 10_15_7 etc.	::iosVersion OS examples: • for iOS - 16.0.3; • for Android - 12.

Attribute field in layer	Portal	Mobile service
app_language	Taken from parameter ::Headers["User-Agent"] Examples: • RU (Russian); • EN (English) etc	::language Examples: • RU (Russian); • EN (English) etc
app_name	Taken from parameter ::Headers["User-Agent"] Examples: Mozilla, Chrome, Safari etc.	::AppName from client in OpenSession If it is empty (for old clients), then the CoGIS Mobile constant entry
app_version	<i>Taken from parameter</i> ::Headers["User-Agent"] Versions examples: <i>109.0.0.0, 16.2</i> <i>etc.</i>	 ::clientVersion Versions examples: for iOS – 6403; for Android - 1000027.
screen_width	Browser window width	::screenWidth <i>Browser window width</i>
screen_height	Browser window height	::screenHeight Browser window height
screen_dpi	-	::dpi

After checking the stable operation of the default logging settings, you can configure a custom map service with your own settings, for example, for interactive map Visit statistics, see Figure 36.

	Display i	n the int	eractive map)				
%			Visit statistics	O	chagochkina	Pyc Er	ig Esp) K,a
Map visit "Visit sta	itistics" from 7/20/2023 - Visits	×	\leftarrow User ochagochki	ina - Users - Пользова	тели			\times
Visits Data/Time Action type Item id	7/20/2023 6:02:02 PM portal/map Visit statistics		Users Login FullName Email Description	ochagochkina Oksana Chagochkina <u>ochagochkina@dataea</u> Training	st.dataeast.			•
Session			Groups	watchers, students, pub	olishers, empt	ty, empty, admins		
Session from 7/19/2023	3 6:23:55 PM - Sessions	ρ	Session					
Date/Time	7/19/2023 6:23:55 PM	(Date/Time	IP client	Device clie	ent OS Name		
IP client OS Name	192.168.0.77:54858 Windows		7/19/2023 6:23:55 PM	192.168.0.7:54858	-	Windows	(j)	
OS Version	10.0		7/19/2023 6:24:09 PM	5.130.103.17:51101	-	Windows	(i)	
App name	Chrome		7/19/2023 6:22:43 PM	192.168.0.7:61262	-	Windows	(i)	
App version	114.0.0.0		7/19/2023 6:21:57 PM	192.168.0.7:57433		Windows	Ň	
App language	ru	- 11			-		(i)	
Jsers			7/19/2023 6:09:02 PM	192.168.0.7:56918	-	Windows	(j)	
Jser ochagochkina - Us	ers	()	Visits					
Login	ochagochkina		Date/Time	Action type	ltem	n id		
Email FullName	<u>ochaqochkina@dataeast.dataeast.</u> Oksana Chagochkina	- 1	7/20/2023 6:03:03 PM	map/attribute_table/choos	e_layer Visit	statistics	()	
Description	Training		7/20/2023 6:03:03 PM	map/object_card/open	Visit	statistics	i	
Groups	watchers, students, publishers, empty, empty,	admins	7/20/2023 6:02:02 PM	portal/map	Visit	statistics	(i)	
		4	7/20/2023 6:00:30 PM	map/object card/open	Visit	statistics	(i)	,

Figure 36 – Example of interactive map Visit statistics with custom map service based on logging data

4.5.Certificates

To add technical certificates, go to Administration menu 0 - Settings – Certificates, press Add button 0, see Figure 37, and specify the required settings:

- Certificate public key file in PEM format
- Certificate private key file in PEM format
- If needed, enter Private key password (if set).

Scogis Maps catalog	Pyc Eng Esp Login 🔅
General settings User interface File storages Logging	Certificates 🔶 Certificat 🖉 Certificate public key file in PEM format
Certificates GIS servers list	/var/cogis/portal/certificates/subject.crt Certificate private key file in PEM format /var/cogis/portal/certificates/subject.key
Administrator permissions Personal account, authorization and registration	Private key password (if set)
User accounts management Coordinate systems SMTP server	Encrypt password by saving settings

Figure 37 – Example of added certificate in Settings - Certificate tab

If you need to add a technical certificate with a digital signature key when generating reports for specific layers of map services, then in the Report tab, near the Certificate option, specify the required available certificate, see example on Figure 38, mode details are in section *5.7 Reports* of the *CoGIS - Creating map applications* manual.

	ID construct_en1	Name ad_constructions	() Ⅲ ()	
EN version				
=	Add report			
R	🖌 Report 🖉		Run asyncronously	
	Template	solutions/ad_constructions/report.xlsx	$(\mathbf{V}) $	
Ē	Output file name	report_constructions		
T.	Actions with report	Download		
~		Attach to object Save attachm	ens immediately	
F	Certificate	not selected)	
	Calling an externa	Il not selected		
:.	Add data source	Certificat	Expand all	
⊕	D AD			
Ē	Parameters 🕀		Expand all	
Ð	: > Date			

Figure 38 – Example of setting certificate in Report tab

4.6. Giving web access to web server files

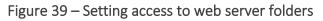
Sometimes during work you need to get access to web server files or folders. For example, to create offline maps, CMF2 files are used. During web portal debugging it is convenient to view log

files straightaway. Report on selected thematic layers of online map is made in XLSX format. As a rule, all these files are stored on web server. Besides, in CoGIS Portal you can download files and use them for information purposes, for example, create the link provided for automatic file download.

Prior to setting access privileges to web server folders, make sure that full access to these folders is allowed for your account. Then, in CoGIS Portal in *General settings* tab, in *File storages* section specify folder location and its name that will be displayed to users. The folder content will be available for update and download in the *Files* section of *Administration* menu.

For example, Figure 39 shows location of web server folders and how they are displayed in the *Files* section. If you want to allow web access to files for all users, check the *Allow downloading via web* option for the folder where these files are stored.

	Administration/Setting	gs		
S COGIS Maps catalog		Pyo	c Eng Esp Kaa 👌 🗔	
General settings	File storages (+)			
User interface	Name	Root folder path	Allow downloading via web	
File storages		· · · · · · · · · · · · · · · · · · ·	Actow downtoading via web	
Logging	COGIS.FrontEnd	/COGIS.FrontEnd		×
Certificates	Мобильный сервис	/COGIS.Mobile		×
GIS servers list	: Портал (App_Data)	/COGIS.FrontEnd/App_Data	0	×
Administrator permissions	: Портал (Customer)	/COGIS.FrontEnd/wwwroot/Cust	:0	×
Personal account, authorization and registration User accounts management	: Мобильный сервис (App_Data)	/COGIS.Mobile/App_Data		×
Coordinate systems	: Логи	/COGIS.Logs		×
SMTP server	Оффлайн карты	/COGIS.OfflineMaps		×
Г. Портал Портал Портал (Арр_Data) Портал (Customer) Побильный сервис Логи Оффлайн карты Спортал ссийту	Refresh	Designer CoGIS SOE rules User accounts Files Services GIS server Mobile service settings Settings		
> C altay				



4.7.User interface

4.7.1. General information

In User interface tab, you can specify the following interface settings, see Figure 40:

- Select interface language;
- Specify welcome page;
- Edit menu;
- Download logo;
- Specify page title in browser;
- Set color palette;
- Specify footer content;
- Set input templates (regex).

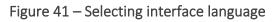
	dministratio	n/Settiı	ngs					
SCOGIS Maps catalog							Pyc Eng Esp	Login
General settings	Languages		🗸 Русский	🔽 English	1	Español	🗆 Қазақ	
User interface				Linguisi		Lapanor		
File storages	Default language		Russian		~			
Logging	Welcome page		Maps catalog		\sim			
Certificates	Page title templates							
GIS servers list	Russian	{0} VM-DE	MO					
Administrator permissions	English	{0} VM-DE	MO					
Personal account, authorization and registration	Spanish	{0} COGIS						
User accounts management		foll cogio						
Coordinate systems	Site menu 🕀				_		_	
SMTP server	Maps catalog			~		Show icon in bro Show icon only	owser 🗌 Show subm	ienu X
Maintenance work					0	Show icon only		
Payment	Logo in site header							
Licensing	🛛 🚱 cogis							
	Logo link							
	Logo on map page							
	9							
	Google Analytics cod	le						

Figure 40 – General settings, User interface tab

4.7.2. Language

The interface language is set in *User interface* tab shown on Figure 41.

Administration/Settings						
Scogis Maps catalog				Pyc Eng Esp	Login	
General settings	Languages					
User interface		English	< Español	🗌 Қазақ		
File storages	Default language		Russian	^		
Logging	Welcome page		Russian			
Certificates			English			
GIS servers list	Page title templates		Spanish			
Administrator permissions	Russian	{0} VM-D	Kazakh			
Personal account, authorization and registration	English	{0} VM-D				
User accounts management	Spanish	{0} COGIS	5			



At the moment English, Russian, Spanish and Kazakh are available. Select the default language.

4.7.3. Start page

By default the start page is *Map catalog* page described in the *Setting map catalog* section of the *CoGIS - Creating map applications* manual. To redefine the start page, select any other portal element, for example, page or online map from the drop-down list of Welcome page, see Figure 42.

Administration/Settings						
COGIS Maps catalog						
General settings	Languages		🗹 Русский 【	English		\checkmark
User interface	Default language		Duration			
File storages			Russian		<u> </u>	
Logging	Welcome page		Maps catalog		^	
Certificates	Page title templates	recent,	/arm_welltracking			
GIS servers list	Russian	{ recent,	/arm_forest			
Administrator permissions	English	recent,	/cadastre			
Personal account, authorization and registration	Epopish	recent,	/spain_agro/dispatch	her		
User accounts management	Spanish	recent,	/sakhalin_invest			
Coordinate systems	Kazakh	{ recent,	/constructions_data			

Figure 42 – Selecting start page

4.7.4. Menu

You can edit menu adding new items and specifying their representation. Any CoGIS Portal element can be selected as the menu item. Go to *User interface* tab to start editing menu. In the *Menu* select the element from the list that should be added as menu item, for example, as shown on Figure 43.

Administ	Administration/Settings					
Scogis Maps catalog	_	Pyc Eng Esp				
General settings	Site n	info (al strom				
User interface	1	info/platfrom				
File storages	:	Q				
Logging		test_users ^				
Certificates	:	Lagos CMF2 Bug				
GIS servers list	:	Lagos offline				
Administrator permissions		altai_raster				
Personal account, authorization and registration	- :	Folder_1				
User accounts management		Map_224				
Coordinate systems	Logo	Map_227				
SMTP server		Map_226				
Maintenance work		Map_180				
Payment	Loge	Map_120				

Figure 43 – Setting web portal menu

If you select folder as the menu item, you can set its display method as drop down list of child elements. To do so, check the *Show submenu* option.

Menu items can be displayed as following:

- Name;
- Name with icon;
- Icon.

To download icon, press the button shown on Figure 43 above. After that, check the *Show icon in browser* or *Show icon only* options, respectively. The menu item name is set in *CoGIS Designer, General settings* tab.

Elements are displayed based on access rights set in the *Access permissions* tab and described in section *Permissions for access to element*. If after menu editing the selected element has not been displayed as the menu item, it means that your settings do not correlate with set access rights for elements. For example, if for the element English language has been selected and the default language is Russian, the element would not be displayed. Or, if you hide some element from user, the menu item made from this hidden element will also not be displayed.

4.7.5. Logo

Download logos, one of which will be displayed in the CoGIS Portal menu, and the other on online map. Logo on online map is the button for going to *Map catalog* tab. Web portal logo is the button for going to URL address specified in the *Logo link* field. See Figure 44 to learn where settings are specified and how they are displayed.

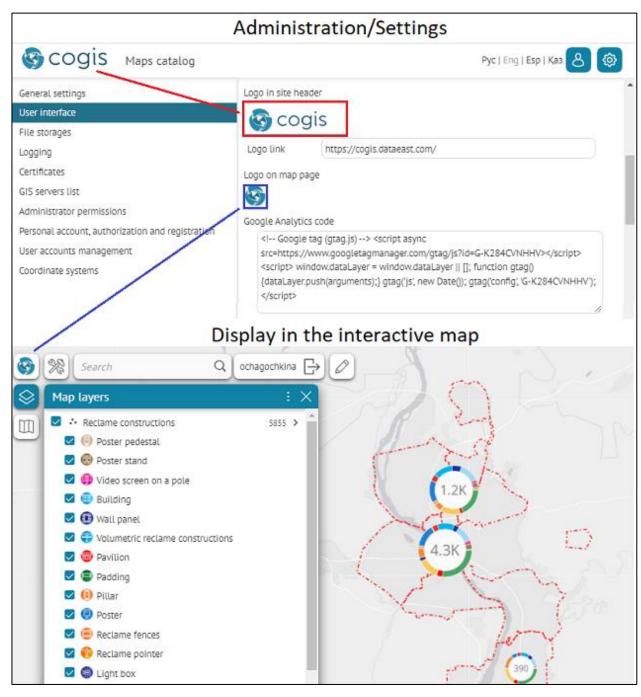


Figure 44 – Setting logo display

4.7.6. Page title in browser

Page title is set in the *Page title templates*. Enter the title in the field correspondent to selected interface language. For example, if you enter <{0} | Your title>, then instead of {0} the title of the current page *Settings* will be displayed, as shown on Figure 45.

Adm	inistration/	Settings		
😵 Settings Your title 🛛 🗙 🕂			\sim	- 0
← → С 🔺 Не зацищено http://192.168.0.1	28/cogis/admin/glob	oalSettings#= 🔯 🍳 🖻 🛣	0 :	
S COGIS Maps catelog			Pyc En	Login
General settings	Languages	🔽 Russian 🔽 English 🗌) Spanish	
User interface				
File storages	Default language	Russian	\sim	
Logging	Welcome page	Maps catalog	\sim	
Certificates	Page title templates			
GIS servers list	Russian	{0} CoGIS		
Administrator permissions	English	{0} Your title		
Personal account, authorization and registration	Engusti	foll ion are		
User accounts management	Site menu 🕀			

Figure 45 – Page title

4.7.7. Additional information. Page footer.

In the lower part of the CoGIS Portal pages and in Maps catalog you can locate useful information such as copyright, terms of using website content, contact details, information about developer, etc. To add this information to the page footer, enter text or HTML code in the *Maps catalog footer* section of the *User interface* tab, see Figure 46.

			Man 198 Control Control	Login
General settings	Maps catalo	ig footer		
User Interface	Russia	an English		
ile storages	©	y Data East		
ogging	<a hre<="" td=""><td>ef="https://cogis.dataea</td><td>st.com">https://cogis.datae</td><td>ast.com</td>	ef="https://cogis.dataea	st.com">https://cogis.datae	ast.com
ertificates				
SIS servers list	X			
Administrator permissions				
Personal account, authorization and registration				10
COGIS Maps catalog			Pyc Eng Esp Ka	• 8 @
	Cocis M	lobile app	-	
	COGIS M	iobite app	5	
	A 42		22	
5				
			7 X I	

Figure 46 – Maps catalog footer

4.7.8. Designing interface

In the Settings/User interface section, the set color palette option is disabled by default. To change the default user interface design of the CoGIS Portal, enable the Override colors and styles option and select the needed parameters. The made changes are shown in the Preview window, see Figure 47.

Scogis About platform Map	os catalog		Pyc Eng Esp Kaa 🔕 🔅
General settings User interface	Override colors and styles <u>Set as default</u>		▲ Preview
File storages Logging Certificates GIS servers list Administrator permissions Personal account, authorization and registration User accounts management Coordinate systems SMTP server Maintenance work Payment	Brand color Set other colors <u>Contrast Pastel White</u> Header color Darker color Lighter color Hover color Input hover Input active Icon color Plugin button color Plugin button color Plugin icon hover color Button color Control hover Control hover Control active Background color Text color on brand	1181A6 1181A6 23718B B7DAE6 DDEEF3 99BFCC 1181A6 545454 FFFFFF 808080 545454 1181A6 52ADCB 1181A6 FFFFFF 1181A6 FFFFFF FFFFFF FFFFFF	Preview
	Map background color	FEFFF	

Figure 47 – Interface design of CoGIS Portal set by default

If needed, the default background color of the map can be changed to white FFFFFF with the *Map* background color option, see Figure 48.

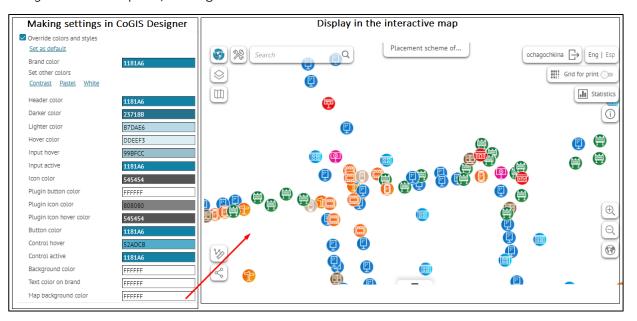


Figure 48 – Default map background color

4.7.9. Input templates

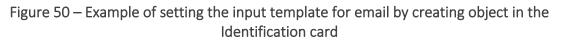
In *Settings/User interface*, in the *Input templates* option you can create and configure the often used input templates (regex), for example for correct input of http(s), url, email etc., see example on Figure 49. Specified input templates can be further applied to the attribute field of the layer, in this case by creating/editing object in the Identification card, the user will see the prompts with the correct attribute information, see Figure 50, see details in section *Map/Services/SOE for map service/Editing*, section *Set fields editing* of the *CoGIS - Creating map applications* manual.

To add a new input template, press Add \bigoplus near the *Input templates* option and enter the needed data.



Figure 49 – Example of set input templates in Settings/User interface

	Making settings in CoGIS Designer							
	EN version							
=	🛃 map_internal_en 🖉							
A	url reclame_constructions/map_internal_en/MapServer/exts/CompositeSoe) \bigcirc \bigotimes Layer							
\$ }	🛃 Editing 🔍 Search 🔛 Picture gallery 😂 Data 😂 Legend 🙄 Routing							
	Set edit attribute parameters 🕀							
	: A 😂 0 phone 🗙							
	Value is required							
	 Allow entering values outside domain 							
	Control Phone ~							
	Regular expression phone							
	phone							
	email							
	url							
	inn							



4.8. Preparing for users authorization and their accounts management

For users to be able to login on web portal and for you to be able to manage their accounts, the following is required to be done:

- Publish table with list of user accounts as map service.
- Establish connection with map service.

The table should contain the following attribute fields of specific type and length, see Table 3.

Table 3 –	Table wit	th user accounts
-----------	-----------	------------------

Attribute field name	Туре	Length
OBJECTID	OID	_
Login	String	255
Password Hash	String	255
PhoneNumber	String	8
Email	String	255

Attribute field name	Туре	Length
FullName	String	255
Description	String	255
ID	String	255
lsConfirmed	SmallInteger	
IsBlocked	SmallInteger	

After publishing table as map service, connection to this map service needs to be established. To do so, go to *User accounts management* tab. Check *Store user information in table* option. Enter map service address and specify layer number. Note, that the map service address part should coincide with GIS server address specified in *GIS servers list* tab, as shown on Figure 51, for example.

	ninistratio	on/Settin	gs		
Scogis Maps catalog				Pyc Eng Esp Kaa 💍	¢
General settings User Interface File storages Logging Certificates GIS servers list Administrator permissions Personal account, authorization and registration User accounts management	Store user infor Service Layer Comparison Fill in by d Login Password Email Full name Description Last name	https://cogisdem 0 none ing lefault	Login PasswordHash Email FullName Description LastName	est/services/common_gl	
Seneral settings User interface File storages Logging Certificates GIS servers list Administrator permissions	GIS servers ⊕ : ГИС-Сервер × Public URL https://cog Windows do	jisdemo.dataeast.cor	n/elitegis	Pyc Eng Esp Kaa 8	@

Figure 51 – Managing user accounts

One user will be able to login differently if you set multiple authorization options as described in section 4.9 below. If you need that the page for managing user accounts provided login options for the user, in *Comparison* field select parameter that will be used for user's authentication, for example, by email.

4.9. Setting users login and authorization

4.9.1. Setting users login and authorization. General information.

Authorization and registration of new users are set on *Personal account, authorization and registration* tab.

- 4.9.2. Setting users registration
 - 4.9.2.1. Setting users registration. General information.

To allow users to register on web portal, check *By login/password* and *Registration* options. Using list of macros shown in Table 4 below, you can create template for registration confirmation letter. **Table 4 – Macros**

Macro	Value
{Login}	Login used to register
{FullName}	Full name specified by registration
{Email}	Email
{SiteLink}	Link to CoGIS Portal
{SubmitRegistrationLink}	Email confirmation link

Figure 52 below shows example of template for registration confirmation letter.

Administr	ration/Settings			
Scogis Maps catalog		Pyc Eng Esp Kaa 👌 🗔		
General settings	Add user group at any registr	ration 🕂		
User interface	empty	~ ×		
File storages				
Logging	Email notifications			
Certificates	🔺 🗹 Send an email to us	ser to verity email		
GIS servers list	Subject			
Administrator permissions	Registration confirma	tion at cogisdemo.dataeast.com		
Personal account, authorization and registration	Body			
User accounts management	<div>You have registered on {SiteLink}.</div>			
Coordinate systems	<div>Your account log</div>	gin: {Login} e-mail, follow the link		
SMTP server	{SubmitRegistrationL			

Figure 52 – Example of template for registration confirmation letter

4.9.2.2. Sending automatic letters to users

For automatic sending of registration confirmation to specified user's email, set connection parameters for SMTP server. For setting of automatic letters to registered users, go to *SMTP server* tab, see Figure 53.

Administration/Settings				
= 🚱 cogis		Рус Eng Esp Қаз 💍		
General settings	SMTP server			
User interface				
File storages	Server	mail.dataeast.local		
Logging	Port	587		
Certificates	SSL enabled			
GIS servers list				
Administrator permissions	Authorization			
Personal account, authorization and registration	From	NOREPLY@mail.dataeast.ru		
User accounts management	Login	DATAEAST\NOREPLY		
Coordinate systems	5			
SMTP server	Password	······		
Maintenance work	Encrypt login and password	d by saving settings		
Payment	Asynchronously			
Licensing	Waiting time	30 seconds		

Figure 53 – Connecting to SMTP server

Enter server name, port, email, login and password. If you need that login and password used for sender's authentication would not explicitly be displayed on this tab and would not be saved, encrypt them checking *Encrypt password by saving settings* option.

Information about users registered on CoGIS Portal is transferred to GIS server.

4.9.2.3. Additional information in the registration window

If you want that in the lower part of the registration window the additional information is shown, for example, Privacy policy, go to *User interface* tab, select the required field in the *Registration window footer* section and enter text or HTML code, as shown on Figure 54 for example.

COGIS About platfor	Administration/Settings Maps catalog	Pyc Eng Esp Kaa 👌 🔞
		Pyc chig csp Nas
General settings	Registration window footer	-
Jser interface	Russian English Spanish Kazakh	
ile storages		
ogging	<pre><span <="" pre="" style="color: #0000ff"></pre>	
ertificates	sending any form of request, you consent to the processi LLC in accordance with applicable law, without reservation	
SIS servers list	terms.	
dministrator permissions		
Personal account, authorization and registi	ration	
lser accounts management		Land Contraction Contraction
	Registration window	
COGIS About platform	Maps catalog	Pyc Eng Esp Kas
	Sign up	\times
	C-	- nc
	СС Логин	ps
This p	ortal	nd eLiteGIS
	Пароль	
Search	@	rting: By default By name By
X	Полное имя	
	Email	
$\mathbf{\Lambda}$		
1. 1. 1.	Телефон	
		24 11
	Адрес	
	Login Sign up	
demo	nap	S Mobile apps
demo		e Minimu Du

Figure 54 – Additional information in the Registration window

4.9.2.4. Registration with confirmation

If you want to get confirmation from users registering in CoGIS Portal, for example, their agreement with the privacy policy, go to *User interface* tab. In the *Registration window footer* section check *Require confirmation* option and enter the appropriate text or HTML code. In this case the user registering in CoGIS Portal will need to first read the Privacy policy text and agree with its terms, after that the *Register* button will be enabled. The settings example and *Registration* window view are shown on Figure 55.

A	dministration/Settings	
S COGIS About platform	Maps catalog	Pyc Eng Esp Kaa 💍 🔅
General settings	Registration window footer	*
User interface	Require confirmation	
File storages	Russian English Spanish Kazakh	
Logging	<pre><span style="color: #0</pre></th><th>0000ff;">By registering on this site and/or</pre>	
Certificates	sending any form of request, you consent to the pro	
GIS servers list	LLC in accordance with applicable law, without rese terms.	ervation or restriction, you accept the
Administrator permissions		
Personal account, authorization and registration	n	
User accounts management		
	Registration window	
SCOGIS About platform	1aps catalog	Pyc Eng Esp Kaa Login
	Sign up	×
		^ps
This porta	L Email	nd eLiteGIS
Q Search		rting: By default By name By popula
	Phone	
	Address	
	Description	
	Email.	14 11
ه يتبو الرا	By registering on this site and/or sending any form of request,	
	you consent to the processing of your personal data by Data	2
demo ma	East LLC in accordance with applicable law, without reservation or restriction, you accept the terms.	S Mobile apps
Geno_ma		
	Login Sign up	Visits: 0

Figure 55 – Registration with confirmation

Without sending agreement to process personal data, the user will not be able to register in CoGIS Portal, as the *Register* button will be disabled.

4.9.3. Setting users authorization

4.9.3.1. Setting users authorization. General information.

You can set authorization of users registered:

- on GIS server, to do so, check *By login/password* option.
- via social networks, to do so, select network in the list and enter requested parameters.

4.9.3.2. Setting users authorization via social networks

For setting users via social networks select social network from the provided list and enter the requested parameters.

• Facebook

Enter the application ID to *app_id* field. The app ID can be obtained at <u>https://developers.facebook.com/</u>. Go to the website, login or authorize. Go to *My applications* and select *Add new application*. Fill in the form shown on Figure 56.

facebook for developers	18/14/1	1.1	
Создайте новый ID приложения			
Начните интегрировать Facebook в свое приложение или сайт			
Отображаемое название			
Название, которое вы хотите ассоциировать с этим ID приложен	ия		۲
Эл. адрес для связи			
Используется для важных сообщений о вашем приложении			0
Продолжая, вы соглашаетесь с Политикой платформы Facebook	Отмена	Создайте ID прил	ожения

Figure 56 – Creating application ID

Press *Create application ID*, after that the app ID will be shown on the page, see example on Figure 57. This value should be entered to *app_id* field.

facebook for d	levelopers	
CoGIS	-	ID ПРИЛОЖЕНИЯ: 404439243497498
# Панель		200000000000000000000000000000000000000

Figure 57 – Application ID

Instagram

For setting authorization via Instagram, enter Client ID and Client Secret values to *api_key* and *clientSecret*, respectively. To obtain these values, go to <u>https://www.instagram.com/developer.</u> Sing in or authorize. Go to *Manage Clients* and select *Register a New Client*. Fill in the form and after that you will get Client ID and Client Secret.

Setting authorization parameters via other social networks is done the same way.

4.9.3.3. Additional information. Authorization window footer.

In the lower part of the authorization window you can locate any additional information. To do so, go to *User interface* tab, select the required field in the *Authorization window footer* and enter the text or HTML code, as shown on Figure 58, for example.

Administration/Settings				
S COGIS About platform Map	is catalog Pyc Eng Esp Kas 💍 🚳			
General settings Au	uthorization window footer			
User interface	Russian English Spanish Kazakh			
File storages	© Date East			
Logging	https://cogis.dataeast.com			
Certificates	Λ			
GIS servers list				
Administrator permissions				
Personal account, authorization and registration				
User accounts management				
Autho	prization window			
= 🚱 cogis	Pyc Eng Esp Kaa Login			
Login	×			
Cc 👦	Data East ID B BKOHTAKTE DS			
This portal				
This portar	or no echeolo			
O Sauch	for authorized users:			
Q. Search Setting: By defaul				
J Pas	rsword *			
	Login			
New user	? Sign up			
© Date East h	ttps://cogis.dataeast.com			
Tr	y to authorize to view maps catalog.			

Figure 58 – Additional information in the authorization window

4.10. Personal account

The view of the *Personal account* window is shown on Figure 59.

My account	×
& admin	
3	Ø
O [≡] Administrator	
admin@elitegis.elitegis	
administrator	
Logout	Update account data

Figure 59 – Personal account window

In the lower part of the personal account window you can locate any additional information, for example, the copyright sign. To do so, go to *User interface* tab, select the required field in the *Personal account window* footer and enter the text or HTML code, as shown on Figure 60, for example.

	Administration/Settings	
Scogis Abou	ut platform Maps catalog Pyc E	ng Esp Kaa 👌 🗔
General settings	Personal account window footer	
User interface	Russian English	
File storages	© Date East	
Logging	https://cogis.datae	ast.com
Certificates		
GIS servers list		
Administrator permissions		\
Personal account, authorization	and registration	<u>↓</u> ⊿
User accounts management	_	1
	Personal account window	1
= 🚱 cogis		Avc Eng 🛛 💍
	My account X	
Q. Search	& admin	Sorting: By default
	I IIII	
	&≣ Administrator	
	admin@elitegis.elitegis	
	Administrator	
	Logout Update account data	

Figure 60 – Additional information in the Personal account window

In order to set additional items of your personal account, go to *Settings/ User accounts management* and specify the required parameters. The sample of additional settings is shown on Figure 61 and Figure 62.

	Administration	/Settings
Scogis About platform N	Maps catalog	Pyc Eng Esp Kas 👌 🗔
General settings	Redefine account parameters	
User interface	Groups (+)	
File storages	Group name	
Logging		
Certificates	Parameters 🕁	
GIS servers list	▷ Login	
Administrator permissions	Password	
Personal account, authorization and registration		
User accounts management	FullName	
Coordinate systems	▷ Email	
SMTP server		
Maintenance work	Phone	
Payment	Address	
Licensing		
	🔺 By email	
	Name	By email >
	Field	Email
	Type	Checkbox 🗸
	Description	Notify me when the status of my posts changes
	Disable editing when a	uthorizing through third-party systems

Figure 61 – Setting additional parameters of personal account

My account	×
Login	-
admin	
Password	
8	
FullName	
Administrator	
Email	
admin@elitegis.elitegis	
Phone	
Address	
Demakova, 10	
Specify addresses of buildings (no more than 10) for which you want to receive notifications	
By email Notify me when the status of my posts changes	•
Logout Update account data	a
Date East https://cogis.dataeast.com	

Figure 62 – Additional information

4.11. Maintenance works

During maintence works it is recommended to disable access to *Maps catalog* content and other CoGIS Portal elements for users. In the *Maintenance work* tab create the appropriate message about current maintenance works to be displayed when users will try to open *Maps catalog* content and other CoGIS Portal pages.

To explain reasons of maintenance works to other user, enter the maintenance works name in the *Name* field that will be shown on the current tab only.

Enter the maintenance works name and description, check *Active* option. After saving settings the message *This mode is active now* will appear. All web portal elements will be hidden for users. The Maps catalog and other CoGIS Portal pages will display only the message you have created, for example, as shown on Figure 63.

A	dministration/Set	tings	
Scogis Maps catalog		Pyc Eng 💍	٢
General settings User interface File storages Logging Certificates GIS servers list Administrator permissions Personal account, authorization and registration User accounts management Coordinate systems SMTP server Maintenance work Payment Licensing	Server time 17:56 Maintenance work : Name Active Start date End date Name for users Engineering works Description The site is undergoing technical	Engineering works This mode is active now! 07/19/2023 17:54 × 07/19/2023 18:30 × work.	
• ·	Maps catalog		
SCOGIS Maps catalog		Pyc Eng Esp Kas Lo	gin
i	Engineering work		

Figure 63 – Preparing for maintenance works

If you know the planned date or time of maintenance works start and end, you can enter this data in the appropriate fields as shown on Figure 64. Please note that server time should be set here. At set time in Maps catalog and on elements Internet pages the message with maintenance works name and description will appear and will be displayed there until the works completion.

Adn	ninistratio	on/Settings	S								
Scogis Maps catalog				*	Jul		▼ 20	23		•	3
General settings	Server time	18:00		Мо	Tu	We	Th	Fr	Sa	Su	
User interface	Maintenance wor	-		26	27	28	29	30	1	2	
File storages	: Name			3	4	5	6	7	8	9	×
Logging				10	11	12	13	14	15	16	
Certificates	Active	т	his				1				
GIS servers list	Start date			17	18	19	20	21	22	23	
Administrator permissions	Start date			24	25	26	27	28	29	30	
Personal account, authorization and registration	End date			31	1	2	3	4	5	6	
User accounts management	Name for user	s		Time		C	00:00				
Coordinate systems	Engineering v	works		Hour		_					
SMTP server	Description										ľ
Maintenance work	Description		-	Minu	te	_					
Payment	i në sitë is un	idergoing technical wo	ΓK.		N	ow			D	one	
Licensing											

Figure 64 – Setting maintenance works start and finish dates

4.12. Licensing

In *General settings* go to *Licensing* section provided for viewing and activating license, see example on Figure 65. To activate the license, administrator should authorize, press *Activate license* button and enter the activation key or multiline license code.

A	dministrati	on/Settings	
S COGIS Maps catalog		Pyc Eng 💍 🥳	2
General settings	License is valid		
User interface			
File storages	License type:	Corporate	
Logging	Product:	CoGIS 10.0 Standard License	
Certificates	Company:	ООО "Дата Ист" Борис Моисеев	
GIS servers list	User:	ООО "Дата Ист" Борис Моисеев	
Administrator permissions	Computer ID:	A323-F157	
Personal account, authorization and registration	Activate license		
User accounts management			
Coordinate systems			
SMTP server			
Maintenance work			
Payment			
Licensing			

Figure 65 – Example of Licensing section with settings

4.13. Preparing for work with offline and online maps

4.13.1. Preparing for work with offline maps

For further work with offline maps you will need the folder of CMF2 files generation that is usually stored on the web server. To establish connection between the CMF2 files generation folder and CoGIS Portal, go to *File storages* tab, select *Enable support for offline maps* option shown on Figure 66, and specify path to the folder in the *Root folder path* field. Make sure that the access to folder is allowed on the web server.

	Administration/Settings	
SCOGIS Maps catalog		Pyc Eng Login 🔅
General settings User interface File storages	File storages 🕀 Name Root folder path	Allow downloading via web
Logging Certificates GIS servers list Administrator permissions Personal account, authorization and registration User accounts management Coordinate systems SMTP server Maintenance work Payment Licensing	 Портал (Арр_Data) ./COGIS.FrontEnd/Арр. Портал (Customer) ./COGIS.FrontEnd/www Мобильный сервис (Арр_Data) ./COGIS.Mobile/Арр_D SOE ./eLiteGIS.SOE Логи ./COGIS.Mobile.Offline Шаблоны отчетов ./COGIS.ReportTemplat eLiteGIS.Services ./eLiteGIS.Services eLiteGIS.Logs ./eLiteGIS.Logs 	vroot/Cu
	Root folder path/COGIS.OfflineMaps	

Figure 66 – Enabling support for offline maps

4.13.2. Referencing to coordinate system

For online map, you can specify settings that will allow you to view it without basemap. To be able to define objects location, you need to reference your online map to coordinate system. Specify coordinate system in the *User interface* tab in the *Coordinate systems* section. Specify ID or text representation of the coordinate system, see example on Figure 67.

Administration/Settings			
S COGIS Maps catalog el	LiteGIS Manager	Pyc Eng	Esp
General settings User interface	Coordinate systems 🕀		
File storages	Web Mercator 3857 Ø	3857	×
Logging Certificates	wkt	PROJCS[*WGS 84 / Pseudo-	
GIS servers list		Mercator",GEOGCS["GCS_WGS_1984",DATUM["D_WGS_1984",SP HEROID["WGS_1984",6378137,298.257223563]],PRIMEM["Gre	•
Administrator permissions Personal account, authorization and registration	: Minna / UTM zone 31N 🖉	enwich",0],UNIT["Degree",0.017453292519943295]],PROJECTI	11
User accounts management	wkid	26331	ſ
Coordinate systems SMTP server Maintenance work Payment	wkt	PROJCRS["Minna / UTM zone 31N", BASEGEOGCRS["Minna", DATUM["Minna", ELLIPSOID["Clarke 1880 (RGS)",6378249.145,293.465,	•
Licensing	: UTM 44 N 🖉		>
	wkid	32644	
	wkt	PROJCS["WGS_1984_UTM_Zone_44N",GEOGCS["GCS_WGS_198 4",DATUM["D_WGS_1984",SPHEROID["WGS_1984",6378137,29 8.257223563]],PRIMEM["Greenwich",0],UNIT["Degree",0.01745 3292519943295]],PROJECTION["Transverse_Mercator"],PARA	•

Figure 67 – Example of setting coordinate systems

4.13.3. Link to map

During work with online map, the user can share its current status with other users. For this, the link is provided that can be either client or server one.

The client link is the link generated by default which contains the following information:

- Map extent used at the moment of the link generation;
- Object's identification dialog, identification card, attribute table, if they were open at the moment of the link generation;
- Layer in the attribute table selected at the moment of the link generation.

The server link requires additional settings and has number of benefits as compared with the client link:

- It contains more information about the map;
- It is shorter;
- It is automatically highlighted.

Link to map is generated on pressing \leq Link to map. By default the button \leq Link to map is shown in the lower left corner of the online map, if other location is not specified in the EMB Buttons location on map tab. By pressing the button the Link to map dialog will appear containing the client link, the Add to Favorites button and the field for entering the link name. The example of the link to map is shown on Figure 68.

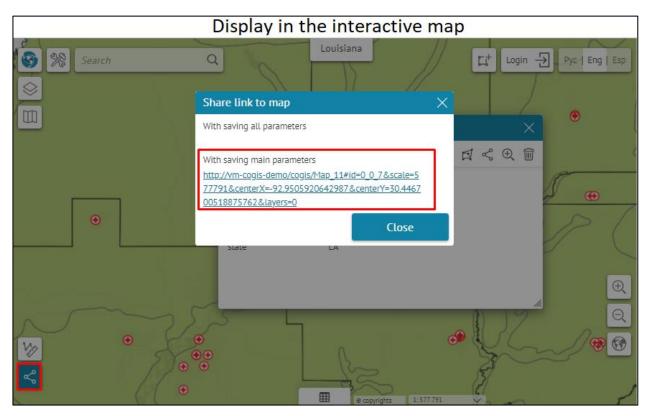


Figure 68 – Client link to map generated by default

Copy the link to share it with other users. You can also save this link to favorites by pressing the same-named button. In this case your link will be displayed in the *Favorites* window with the name you specified in the data input field. By default the link is named by the map name. The *Favorites*

window is opened by pressing button. To learn how to add this button on your online map, see *Buttons location on map* section of the *CoGIS - Creating map applications* manual.

On Figure 68 above you can see that the client link looks quite bulky as it contains the list of parameters describing the current map state. In contrast to the client link, the server link looks much shorter, see Figure 69.

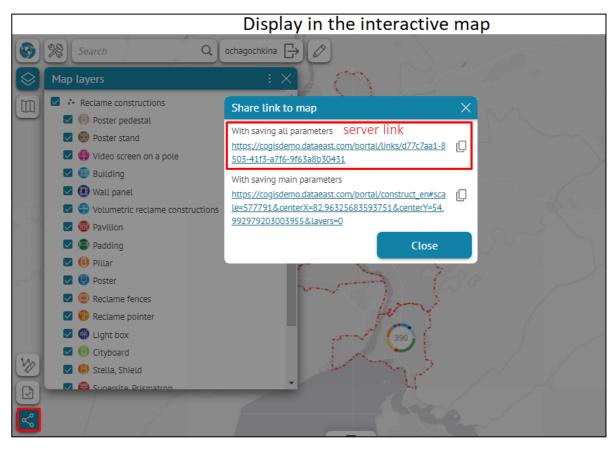


Figure 69 – Server link to map

If you want that by pressing \leq *Link to map* button the server link to your online map is generated, the following needs to be done:

- Create the table with list of parameters describing the current map state;
- Publish this table as the map service;
- Establish connection to map service.

The table should contain the following attribute fields, see Table 5.

Table 5 – Parameters describing current map state for generation of server link to map
--

Attribute field name	Туре	Length
OBJECTID	OID	—
LinkID	String	255
MapName	String	255
UserName	String	255
LinkData	String	1073741822
created_user	String	255
created_date	Date	8
last_edited_user	String	255
last_edited_date	Date	8

Publish the table as map service. After that establish connection to this service on web portal. To do so, go to Administration menu and select Settings. In the appeared settings window in the *General settings* tab establish connection to the map service. Check *Use service to store links from the 'Share link to map' tool* option and enter URL address of the map service to the *Service* field, specify layer number in the *Layer* field. Note that part of the map service address should coincide with the address of the GIS server specified in the *GIS servers list* tab, see Figure 70 for example.

Administration/Settings				
Scogis Maps catalog	initiation, setti	Pyc Eng Esp Kas 💍 🔕		
General settings User interface File storages Logging Certificates GIS servers list Administrator permissions Personal account, authorization and registration User accounts management Coordinate systems SMTP server Maintenance work Payment Licensing Maps catalog	Site URL Internal site URL Default database Maximum loaded file size, KB Folders SOE folder path Mobile service folder path Service Inttps://cogis Layer 0	https://cogisdemo1.dataeast.com/portal/ PostgreSQL v 1048576 /cDGIS.Mobile the 'Share link to map' tool sdemo1.dataeast.com/elitegis_rest/services/common_l		
General settings User interface File storages Logging Certificates GIS servers list Administrator permissions Personal account, authorization and registration	GIS servers : ГИС-Сервер Public URL Windows domain Administration access URL to REST API https://cogisden	Pyc Eng Esp Kaa × https://cogisdemo1.dataeast.com/elitegis		

Figure 70 – Connection of service for storing links to maps

In this case the generated link will contain not the parameters list itself, but the list ID, which results in the link shortening.

Besides the current map extent, the object's identification dialog, the identification card, and the attribute table layer opened at the moment of the link generation, the server link contains the following data:

- Selected basemap and specified transparency value, if the *Basemap* window was opened at the moment of the link generation;
- Visibility of layers in the *Legend* window, specified at the moment of the link generation;
- The Tab selected in the *Identification dialog* at the moment of the link generation;
- Attribute table with sorting specified at the moment of the link generation;
- Attribute and spatial filters selected for layers at the moment of the link generation;

- Gallery of images, timeline, if they were open at the moment of the link generation;
- The Tab selected in the *Identification card* at the moment of the link generation;
- Custom layers symbology;
- Objects created by user in the current extent;
- Result of measurement performed at the moment of the link generation;
- Search request and result.

Sometimes it is needed to generate the link to map so that following this link the user could see the map with specific parameters. Link to map is created based on the following parameters, see Table 6.

Parameter	Parameters of map application	Example
URL	URL of the map application	https://cogis.dataeast.com/portal/NSK_Zoo_ New
Id	ID of the object to which the	id=0_10_1250269
onlyZoom	map will be zoomed, and which identification card will be opened (order number of the service in the map,	id=!0_10_1250269 (instead of the object's identification card the object's callout will be shown)
	number of layer in service and OBJECTID of the object)	onlyZoom=true (the map will be zoomed to object, but the object's card will not be shown)
Scale	Zooming scale	scale=8000
layers	Consecutive numbers of layers of all services that need to be turned on in the legend	layers=0.5.8
centerX	Coordinates to that the map	centerX=82.89287567138673¢erY=54.98
century	needs to be zoomed and the coordinate system	519248891578&
coordSys		
tableServiceUrl	Parameters of the attribute	http://cogis.dataeast.com/portal
tableLayerId	table (URL of the service, number of the layer, height	/NSK_Zoo_New#tableServiceUrl=http:///Ma pServer&tableLayerId=1 &tableHeight=42
tableHeight	of the attribute table)	poerveratuoieta yena iratuoieneigine iz
visibleWidgets	Names of widgets that need to be opened (by name of widget specified in CoGIS Designer)	visibleWidgets=State

Table 6 – Parameters for generating link to map

Parameter	Parameters of map application	Example
login	Open login form or user account	http://cogis.dataeast.com/portal /NSK_Zoo_New?login=true
auth	Open login form if user is not authorized	http://cogis.dataeast.com/portal /NSK_Zoo_New?auth=true
register	Open registration form if user is not authorized	http://cogis.dataeast.com/portal /NSK_Zoo_New?register=true
hideControls	Hide controls	http://cogis.dataeast.com/portal /NSK_Zoo_New ?hideControls=true
disable Pan Zoom	Disable changing map extent and scale	http://cogis.dataeast.com/portal /NSK_Zoo_New ?disablePanZoom=true
disable Identify	Disable objects identification	http://cogis.dataeast.com/portal /NSK_Zoo_New ?disableIdentify=true

5. Setting mobile service for work of CoGIS Mobile applications

5.1. Mobile service settings

Mobile service is provided for work of mobile clients - CoGIS Mobile. To go to server's settings, select *Mobile service settings* in the *Administration* menu, see example on Figure 71.

Mobile service settings contain the following sections:

- General settings
- Logging
- GPS
- Hint
- Notifications
- Push notifications
- Editable layers
- Maps.

Administration/Mobile service settings			
See gro maps catalog			
General settings Logging	Service URL	Designer	
GPS	https://cogisdemo1.dataeast.com/cogismobile	CoGIS SOE rules	
Hint	Link to CoGIS	User accounts	
Notifications	https://cogisdemo1.dataeast.com/portal	Files	
Push notifications	Path to offline maps folder	Services	
Editable layers Maps	/COGIS.Offline.Maps	GIS server	
mahz	Display of server errors in mobile application	Mobile service settings	
	 Exceptions Logic errors List of developers IPs 	Sett	
	::1,127.0.0.1,192.168.0.52		
	GIS server		
	URL		
	https://cogisdemo1.dataeast.com/elitegis		

Figure 71 – Administration/Mobile service settings

5.2. Mobile service. General settings.

The view of the *General settings* window is shown below, see Figure 72.

Administration/Mobile service settings					
🚱 cogis	Maps catalog		Pyc Eng Esp Kaa 🔗 🔅		
General settings		Service URL	https://cogisdemo1.dataeast.com/cogismobile		
Logging GPS		Link to CoGIS	https://cogisdemo1.dataeast.com/portal		
Hint Notifications		Path to offline maps folder	/COGIS.Offline.Maps		
Push notifications		Display of server errors in mobile	application		
Editable layers		🗹 Exceptions 🛛 🔽 Log	ic errors		
Maps		List of developers IPs	::1,127.0.0.1,192.168.0.52		
		GIS server			
		URL	https://cogisdemo1.dataeast.com/elitegis		
		Privileged access			
		Login	admin		
		Password	•••••		
		Authorization			
		☑ With login/password	□ With ESIA		

Figure 72 – General settings of mobile service

Specify link to CoGIS Portal with which the mobile client works, and path to folder with offline maps.

Specify which errors should be shown in mobile application, and list of developers' IPs, URL of GIS server, login and password for privileged access.

Specify options of authorization in mobile client.

5.3. Mobile service. Logging.

The view of the *Logging* window is shown below, see Figure 73.

Administration/Mobile service settings					
🊱 cogis	Maps catalog		Pyc Eng Esp Kaa 💍 🔞		
General settings Logging GPS		Path to root folder			
Hint Notifications Push notifications Editable layers Maps		Actions Errors Debug Requests Allow access to IP adde	Limit (MB) 5000 100 10 20 Iresses only		

Figure 73 – Logging settings of mobile service

For logging of work of mobile service specify paths to files and maximum size of logging files.

5.4. Mobile service. GPS.

For GPS monitoring, the following parameters need to be specified, see Figure 74:

- Whether you need to store data in offline mode;
- Maximum number of points saved in offline mode;
- Minimum deviation in meters;
- Maximum number of requests to server per hour;
- Group of users for GPS monitoring;
- Restriction by device IP.

	Administration/Mobile	service settings
SCOGIS Maps catalo	g	Pyc Eng Esp Kaa 👌 🗔
General settings Logging GPS	GPS data recipients 🕀 Accumulate data offline Maximum number of points offline	×
Hint Notifications Push notifications Editable layers	Minimum deviation in meters	20 0 120
Maps	Only for user groups Only for devices IPs	
	ArcGIS SOE Link to service Layer number	http://vm-cogis-demo/elitegis/i
	Action add point Comparison	→ →

Figure 74 – GPS monitoring settings

Specify SOE link for map service, number of layer for recording results of GPS monitoring and action that needs to be done:

- Update point the last GPS location of mobile device will be recorded;
- Add point all locations of mobile device will be recorded;
- Add point to line the line based on GPS locations of mobile device will be created.

Specify the required fields of map service for recording information, see Figure 75:

- Field with session ID;
- Field with user name;

- Field with data transfer date;
- Field with client date;
- Field with device ID.

Administration/Mobile service settings						
S COGIS Maps catalog			Pyc Eng Esp Қаз 🔗	@		
General settings	ArcGIS SOE 🕀					
Logging	Link to service	http://vm-o	cogis-demo/elitegis/res	×		
GPS	Layer number	32				
Hint	Action					
Notifications Push notifications	add point	~				
Editable layers	Comparison					
Maps	by username and device id	~				
	Authorization check					
	Session ID field					
	SessionID					
	User name field					
	UserName					
	Data transfer date field					
	TransferredDate					
1	Client date field					
	ClientDate					
	Device ID field					
	DeviceID					
	Geo Event 🕂					

Figure 75 – SOE settings for GPS monitoring

In order to set up GPS monitoring via *GeoEvent*, specify service URL and SOAP template for GPS location data of mobile device, see Figure 76.

Administration/Mobile service settings					
S COGIS Maps catalog		Pyc Eng Esp Ka3 🔕 🗔			
General settings	Geo Event 🕂				
Logging	Link to service				
GPS					
Hint	Template	xml version = "1.0"? <soapenv.envelope: xmlns:ws="http://schemas.xmlsoap.org/soap/ws"</soapenv.envelope: 			
Notifications		xmlns:soapenv='http://schemas.xmlsoap.org/soap/en			
Push notifications		velope" <soapenv.body></soapenv.body>			
Editable layers					
Maps					

Figure 76 – Setting GeoEvent for GPS monitoring

5.5. Mobile service. Hint.

If you need to set the address prompt by geocoding service, specify *Geocode request template* and *Reverse geocode request template*, see Figure 77.

Administration/Mobile service settings					
Scogis Maps catalog		Pyc Eng Esp Kas 💍 🔞			
General settings Logging GPS	Geocode request template Reverse geocode request template				
Hint					
Notifications					
Push notifications					
Editable layers					
Maps					

Figure 77 – Setting prompt by address

5.6. Mobile service. Notifications.

In order to enable inner notifications in mobile applications, check *Enable*, specify *Time interval in seconds*, after which the mobile application will search for available notifications. Specify map service, number of layer with notifications, and SQL filter. Specify map service and number of layer with notifications sending rules, see Figure 78.

Administration/Mobile service settings					
Scogis Maps ca	atalog	Pyc Eng Esp Ka3 🔕 🗔			
General settings Logging GPS Hint Notifications Push notifications Editable layers Maps	Enable Time interval in seconds Notifications table Link to service Layer number SQL filter	<pre>300 https://map.novo-sibirsk.ru/arcgis/rest/services/Users/MapServer 2 (SendStatus <> 'cancelled') AND ((DeviceRequirementType = 'everyone') OR (DeviceRequirementType = 'specified' AND DeviceID = '{deviceId}') </pre>			
	Rules table Link to service Layer number SOL filter	0			

Figure 78 – Setting sending of inner notifications of mobile client

5.7. Mobile service. Push notifications.

In order to enable push notifications, check *Enable*, specify SOE for map service and number of layer for recording of push tokens, see Figure 79.

Administration/Mobile service settings					
S COGIS Maps catalog		Pyc Eng Esp Kaa 👌 🔯			
General settings Logging GPS	Enable Link to service	http://vm-cogis-demo/elitegis/rest/services/WorldMap/MapServer			
Hint Notifications Push notifications Editable layers	Layer number Field mapping <u>Fill as default</u> 	0			
Maps	Device type Device model Device ID Session ID	DeviceType DeviceModel DeviceID SessionID			
	AppCore version Client IP Language	AppCoreVersion ClientIP Language			
	Firebase push token Apns push token Voip push token	FirebasePushToken ApnsPushToken VoipPushToken			

Figure 79 – Settings for sending push notifications

5.8. Mobile service. Editable layers.

Settings of web service on work with mobile applications based on CoGIS Mobile including settings for set maps and map services, are specified in the *Editable layers* tab, see example on Figure 80.

	dministration/Mobile se	rvice setti	ngs				
SCOGIS Maps catalog		1	Pyc Eng Esp Kaa	පී 🐵			
General settings	Editable layers 🕀						
Logging	A Service https://map.novo-sibirsk.m	/arcgis/rest/services/Mes	ssages /MapServer/ext	s/CompositeSoe	⊖Lay	ers 2,3,	,4
GPS	For multiple cards	No					
Hint	Skip allowed transactions	Yes					
Notifications	Import/Export Geojson	*II (JII)					
Push notifications	GUID field						
Editable layers Maps	Subtitle fields						
	Layer alias	msg	1				
	Sorting	1650					
	Object creation signature	Add message					
	Object signature	New message					
	Symbol	Download					
	Synchronization setup						
	Layer Update Interval	0	(0 - do not upo	late by timer)			
	Loading objects from the server	Yes					
	Pass objects from client to server	No					
	fields						
	Device ID						
	Session ID						
	Username						
	Data transfer date						
	Last update date	last_edited_date					
	Coloring						
	Туре	By unique values		\sim			
	Field	StateID					
	Icons 🕀						
	www.root\images\messages\	ta Delete Meaning	1 Signature	Accepted	Size	8	×

Figure 80 – Example of setting Editable layers tab in Mobile service settings section

5.9. Mobile service. Maps.

Settings of web service on work with mobile applications based on CoGIS Mobile including settings for set maps and map services, are specified in the *Maps* tab, see example Figure 81.

· ·	ation/Mobile service settings	Pyc Eng Esp	Login
General settings Logging GPS Hint Notifications Push notifications Editable layers Maps	Maps ⊕ : messages Search by QR code No Hide adding tracks No Sample No Editable layers in the map ⊕ Service Service https://map.novo-sibirsk.ru/arcgis/rest/services/Mes Layer type Child Delete layer after publishing No Show layer in legend Only non-empty Layer Settings ⊕ Service https://map.novo-sibirsk.ru/arcgis/rest/sen Field Matching ⊕ from ReportGUID	Layers 23	マ× マ×

Figure 81 - Example of setting Maps tab in Mobile service settings section