MinIO S3 WISECP module

The module allows the company to offer its customers the possibility of managing data storage compatible with S3 object storage using the MinIO S3 solution.

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  - Service/Product configuration
  - Setup guide: MinIO S3 setup
- Admin Area
  - Order Detail
- Client Area
  - Product Home Screen

Description

MinIO S3 module **WISECP**

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The module allows the company to offer its customers the possibility of managing data storage compatible with S3 object storage using the MinIO S3 solution.

> The module requires a fully configured MinIO server to work. The module does not assist in the creation of such a server in any way.

Functions:

- Auto create and deploy product (User and S3 Buckets)
- The module uses only the API to manage the accounts
- Module supports multilingualism (**Arabic, Azerbaijani, Catalan, Chinese, Croatian, Czech, Danish, Dutch, English, Estonian, Farsi, French, German, Hebrew, Hungarian, Italian, Macedonian, Norwegian, Polish, Romanian, Russian, Spanish, Swedish, Turkish, Ukrainian**)
- The module shows the current data usage by the user
- Suspended when the disk limit is exceeded
- Link to instructions for setting up the service in the client area.

Available options in the admin panel:

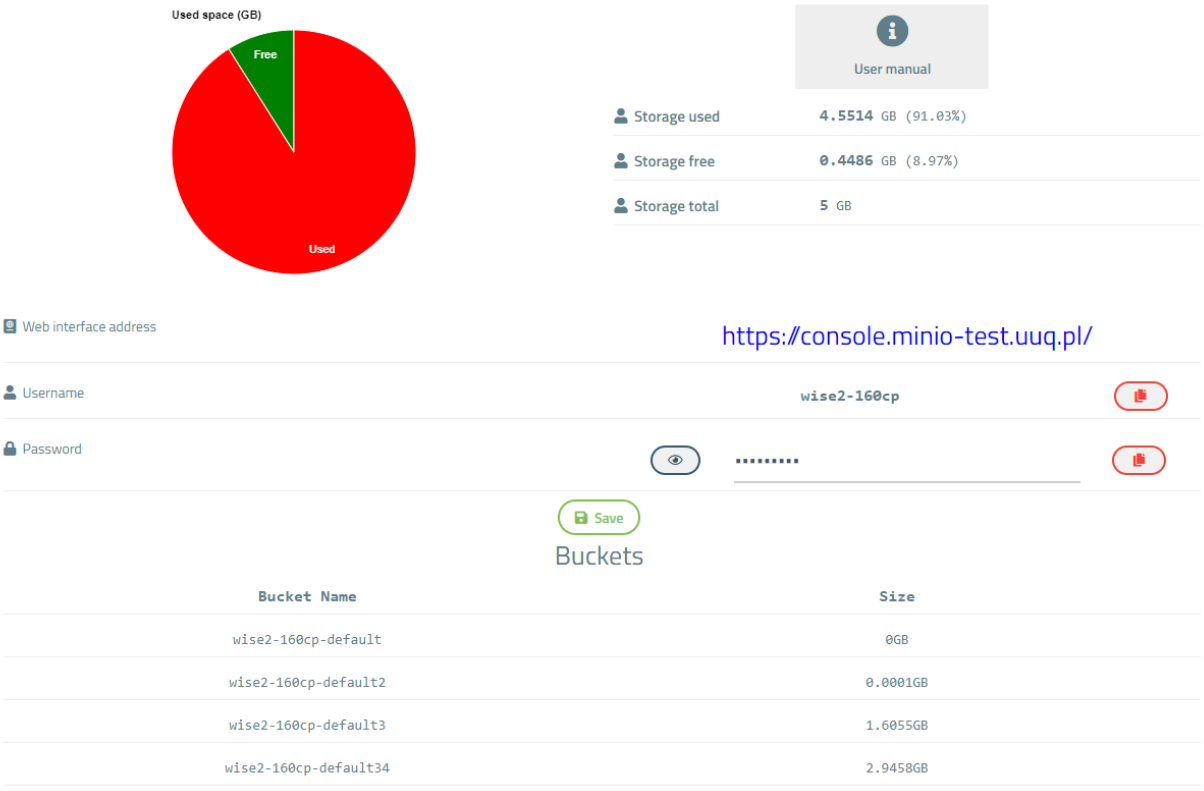
- Create user
- Suspend users
- Terminate users
- Unsuspend users
- Change users password
- Change Package
- API connection status
- Disk status

Available options in the client panel:

- Change the MinIO user password
- Disk status
- Using disk space statistics

WISECP: v3.1.5+, php: v8.x, Ioncube: V12+

MinIO: RELEASE.2024-06-26T01-06-18Z +



MinIO 5GB Order Detail

Detail | Core | Blocks | Order Addons | Requirements | Upgrade / Downgrade | History | Cancellation / Refund

API Module: PUQ MinIOS3

Update Policy | Set Standard Policy | Set Limited Policy

API answer OK

User

Display Name	Status	Policy	Groups	Storage used	Storage free	Storage total
wise2-160cp	enabled	wise2-160cp	USER5	4.5514 GB (91.03%)	0.4486 GB (8.97%)	5 GB

Buckets

Bucket Name	Size	Objects	Creation date
wise2-160cp-default	0 GB	0	2024-05-14T23:43:00Z
wise2-160cp-default2	0.0001 GB	1	2024-05-14T23:44:07Z
wise2-160cp-default3	1.6055 GB	5	2024-05-14T23:44:30Z
wise2-160cp-default34	2.9458 GB	9	2024-05-14T23:44:17Z

Server: console.minio-test.uuq.pl | Username: wise2-160cp | Password: QWEqwe123

Overwrite package settings: ☐ Overwriting the package settings is necessary to personalize the service if you need it.

Send changes to server: ☐ To apply the changes on the server, it is necessary to check this checkbox.

Update

Changelog

MinIO S3 module **WISECP**

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v1.2 Released 26-06-2024

1. Adapted to MinIO version RELEASE.2024-06-26T01-06-18Z

> Attention, the module will not work with versions lower than Adapted to MinIO version RELEASE.2024-06-26T01-06-18Z

---

v1.1 Released 05-06-2024

- client area more adapted for mobile version
- buttons for copying login and password have been added to the client area

---

v1.0 Released 17-12-2023

First version

Installation and configuration guide

Setup (install/update)

MinIO S3 module **WISECP**

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To install and update a module, you must perform one and the same action.

1. Download the latest version of the module.

```
wget http://download.puqcloud.com/WISECP/Product/PUQ_WISECP-MinIO-S3/PUQ_WISECP-MinIO-S3-latest.zip
```

All versions are available: https://download.puqcloud.com/WISECP/Product/PUQ_WISECP-MinIO-S3/

2. Unzip the archive with the module.

```
unzip PUQ_WISECP-MinIO-S3-latest.zip
```

3. Copy and Replace "puqMinIOS3" from "PUQ_WISECP-MinIO-S3" to "WISECP_WEB_DIR/coremio/modules/Product/"

License Activation

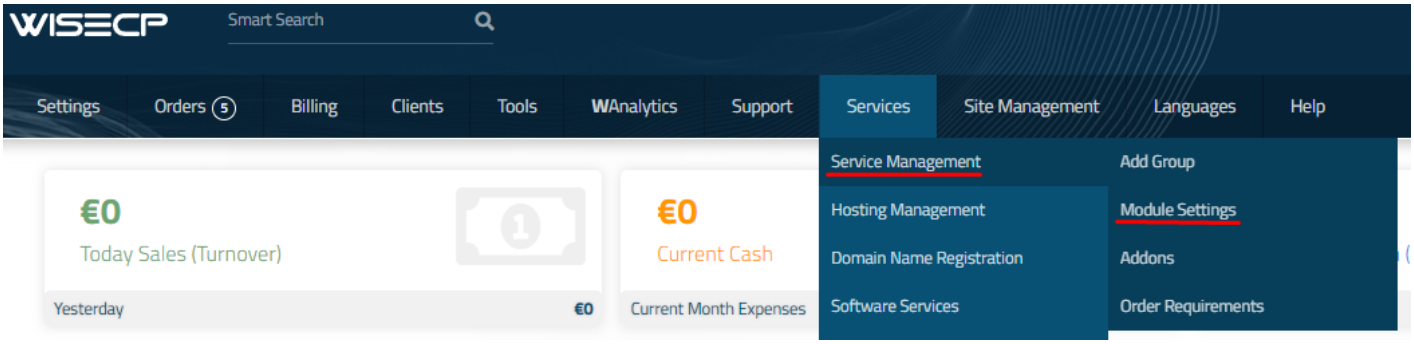
MinIO S3 module **WISECP**

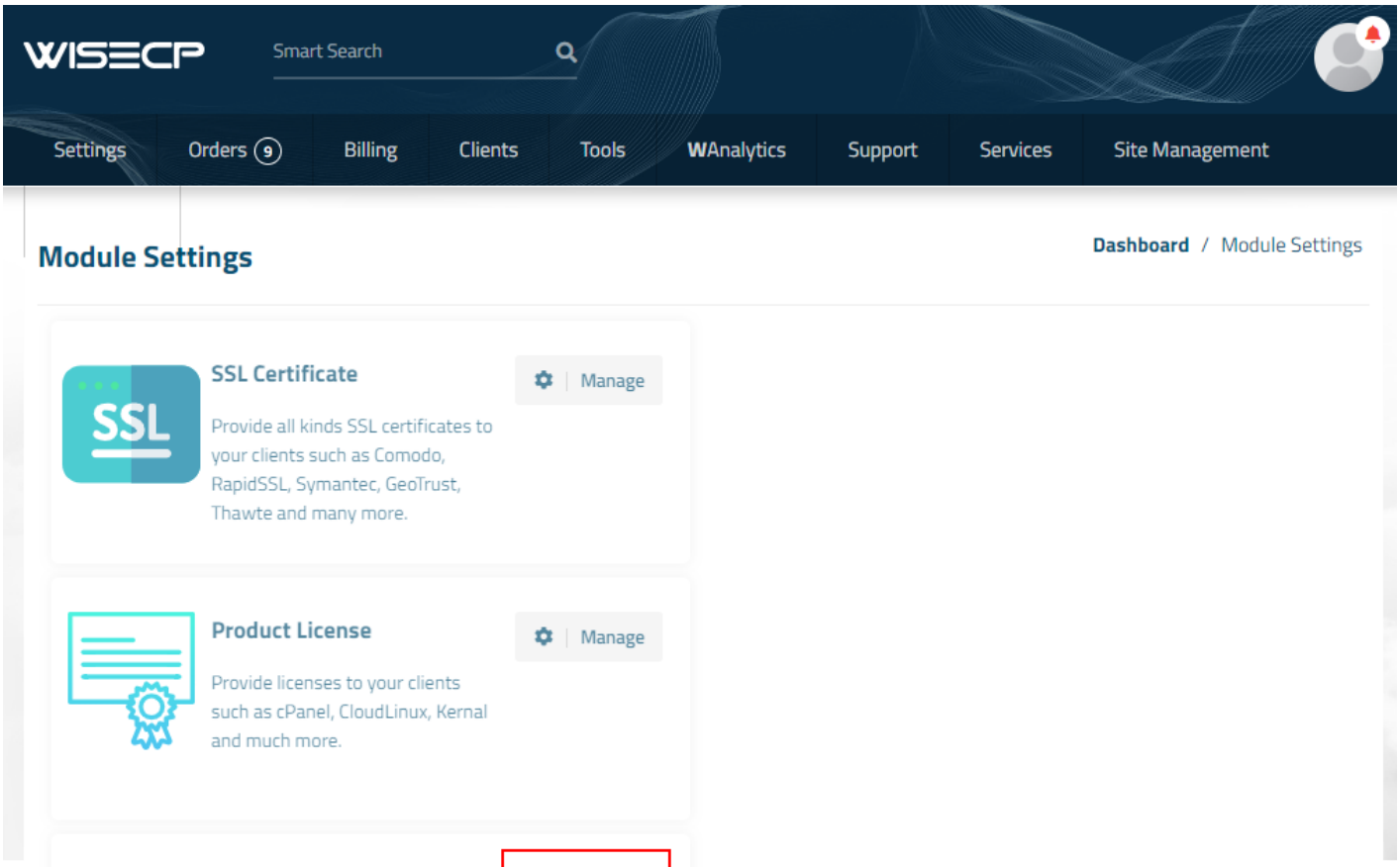
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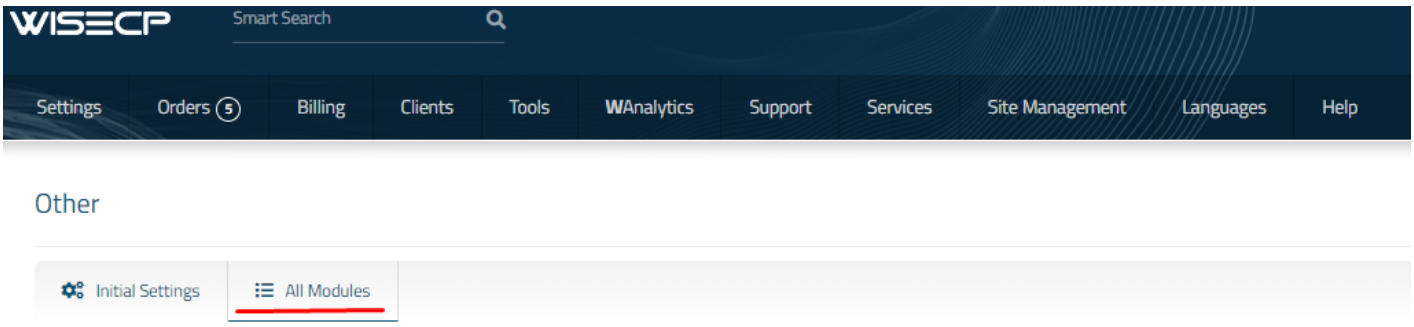
1. Log in to the administrative area of your **WISECP**.

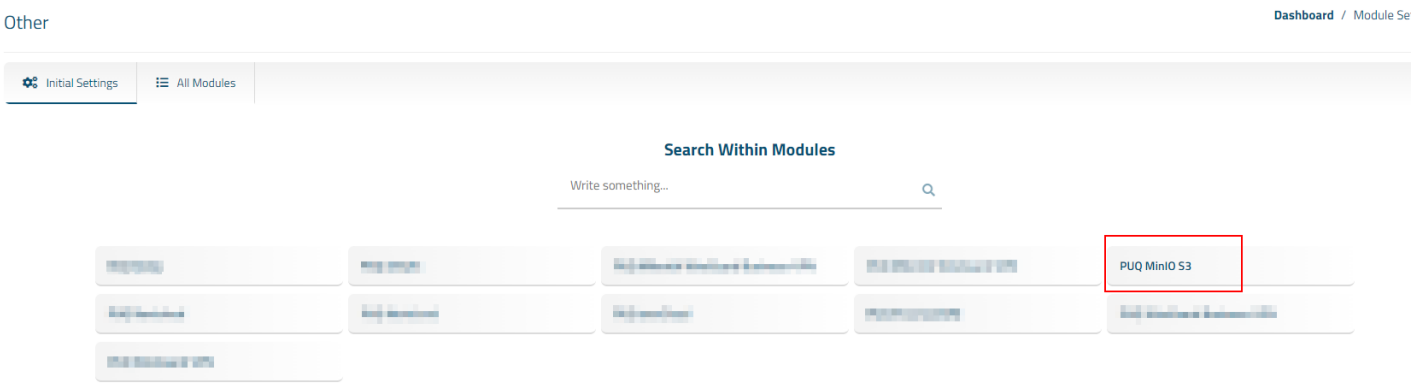
2. Go to module configuration.

```
Services -> Service Management -> Module Settings -> Other -> All Modules -> PUQ MinIO S3
```

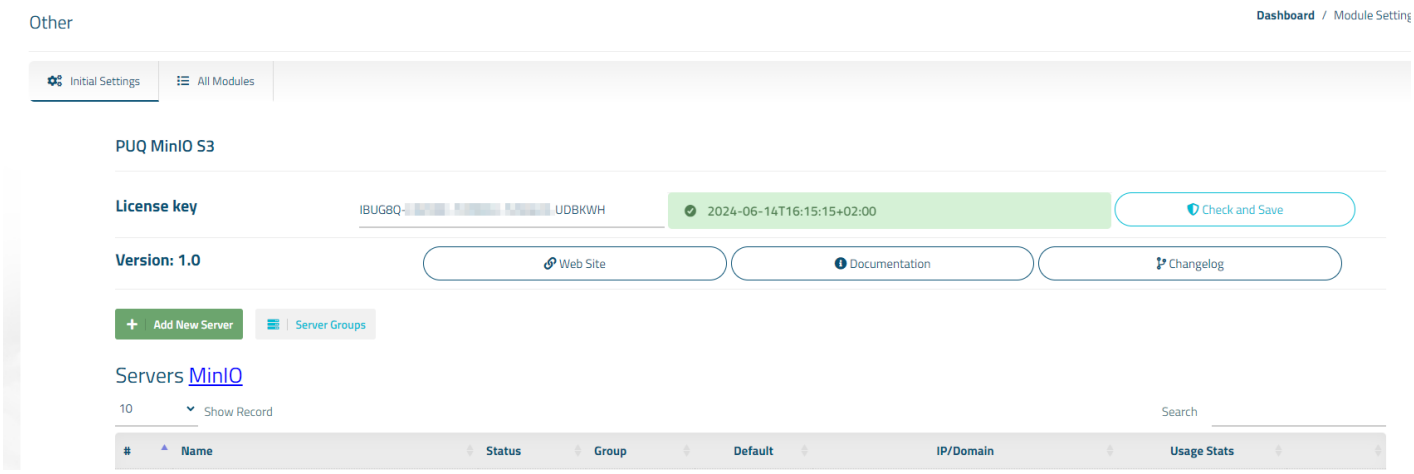



WISECP
Smart Search
Settings
Orders 9
Billing
Clients
Tools
WAnalytics
Support
Services
Site Management
Module Settings
Dashboard / Module Settings
SSL
SSL Certificate
Provide all kinds SSL certificates to your clients such as Comodo, RapidSSL, Symantec, GeoTrust, Thawte and many more.
Manage
Product License
Provide licenses to your clients such as cPanel, CloudLinux, Kernal and much more.
Manage
Other
Generic modules that are not connected to any group
Manage


WISECP
Smart Search
Settings
Orders 5
Billing
Clients
Tools
WAnalytics
Support
Services
Site Management
Languages
Help
Other
Initial Settings
All Modules



3. On the open page, enter the purchased license key for this product and click the '**Check and Save**' button to validate the key and save it.



Add server (MinIO) in WISECP

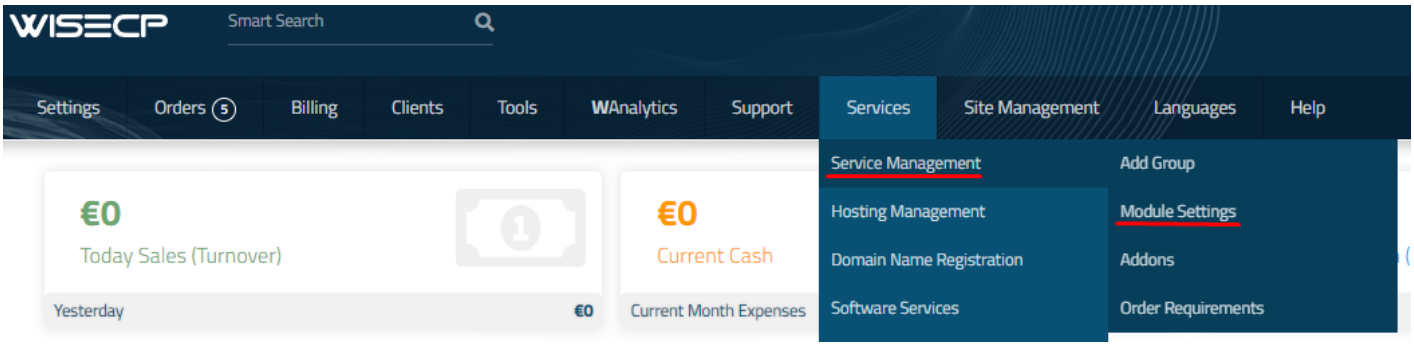
MinIO S3 module **WISECP**

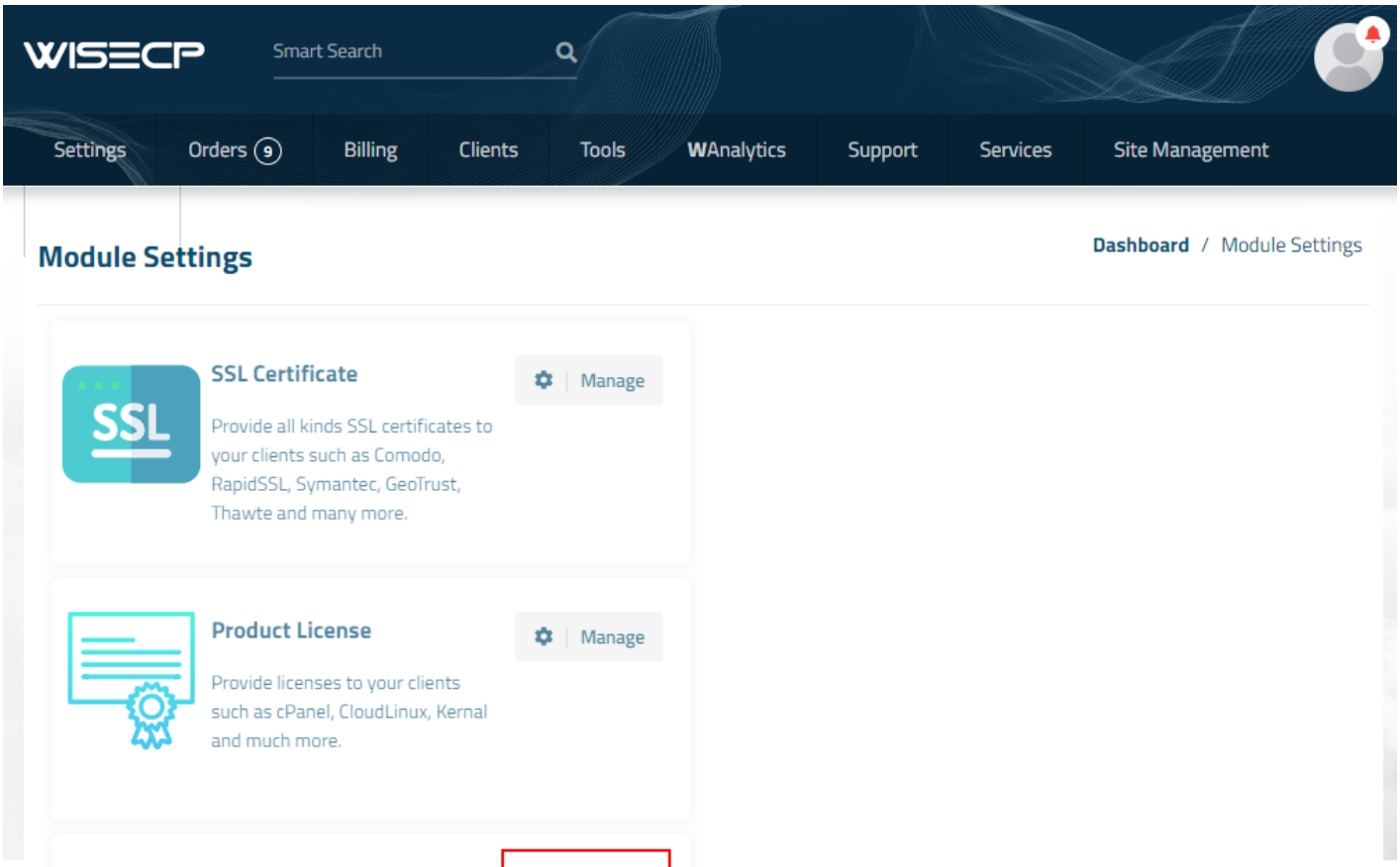
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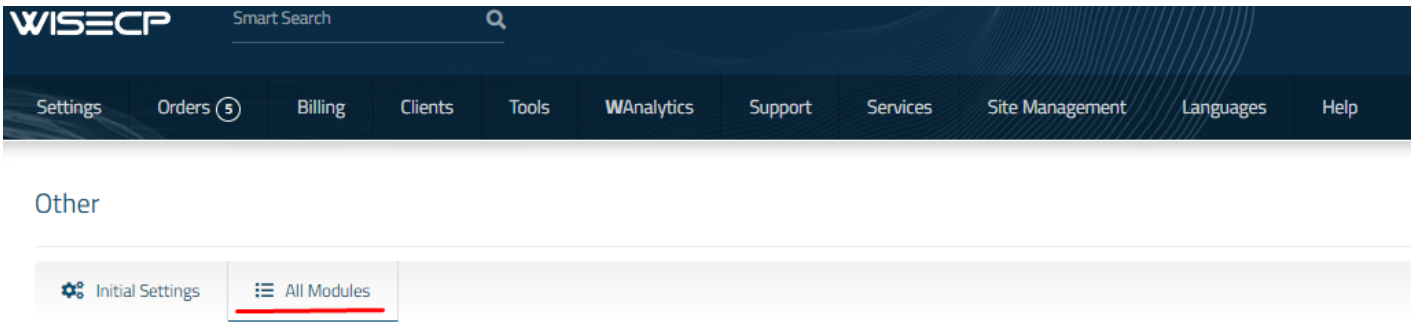
1. Log in to the administrative area of your **WISECP**.

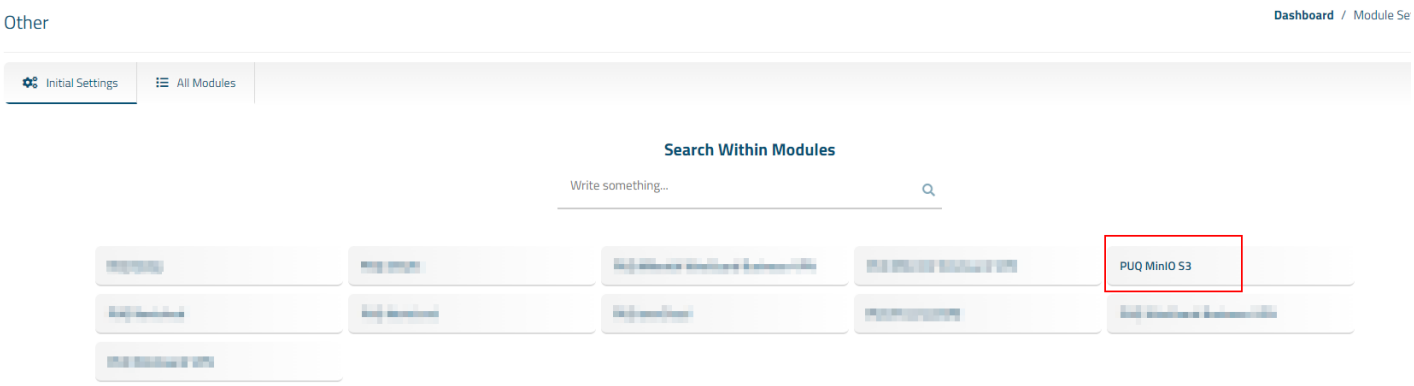
2. Go to module configuration.

```
Services -> Service Management -> Module Settings -> Other -> All Modules -> PUQ MinIO S3
```

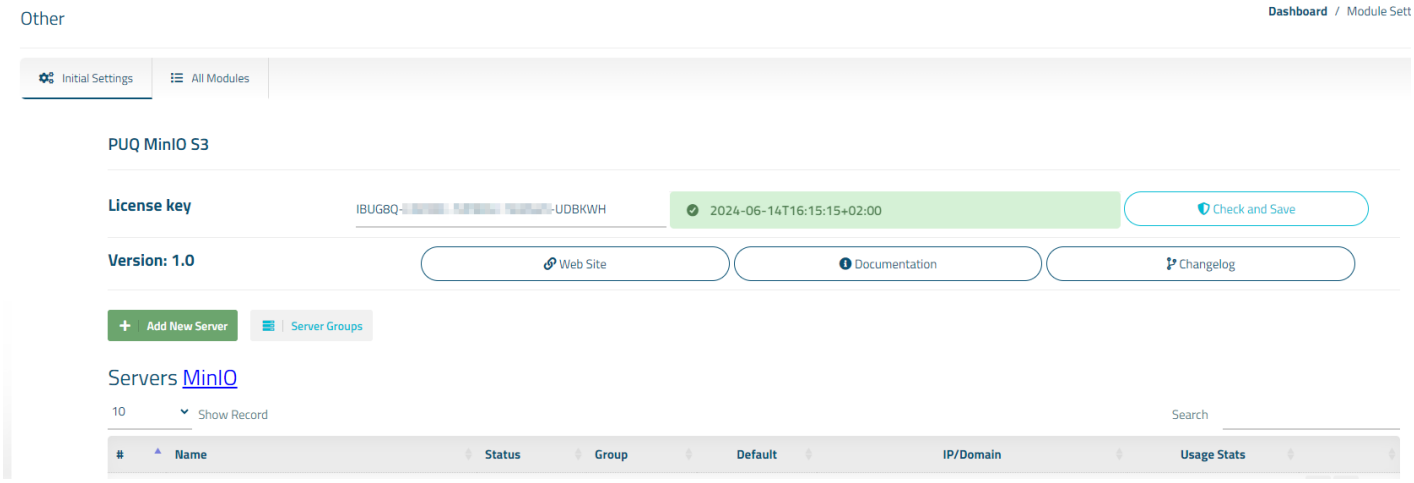



WISECP
Smart Search
Settings
Orders 9
Billing
Clients
Tools
WAnalytics
Support
Services
Site Management
Module Settings
Dashboard / Module Settings
SSL
SSL Certificate
Provide all kinds SSL certificates to your clients such as Comodo, RapidSSL, Symantec, GeoTrust, Thawte and many more.
Manage
Product License
Provide licenses to your clients such as cPanel, CloudLinux, Kernal and much more.
Manage
Other
Generic modules that are not connected to any group
Manage


WISECP
Smart Search
Settings
Orders 5
Billing
Clients
Tools
WAnalytics
Support
Services
Site Management
Languages
Help
Other
Initial Settings
All Modules

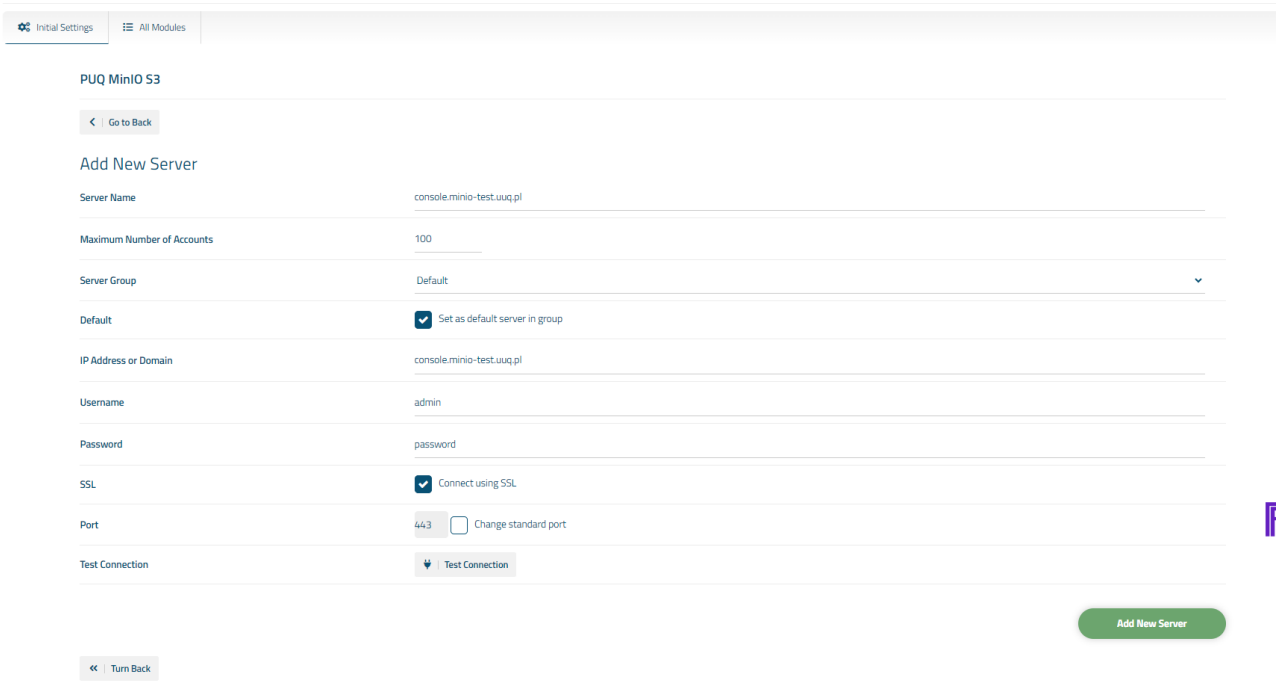


3. In the opened page, click the '**Add Server**' button.

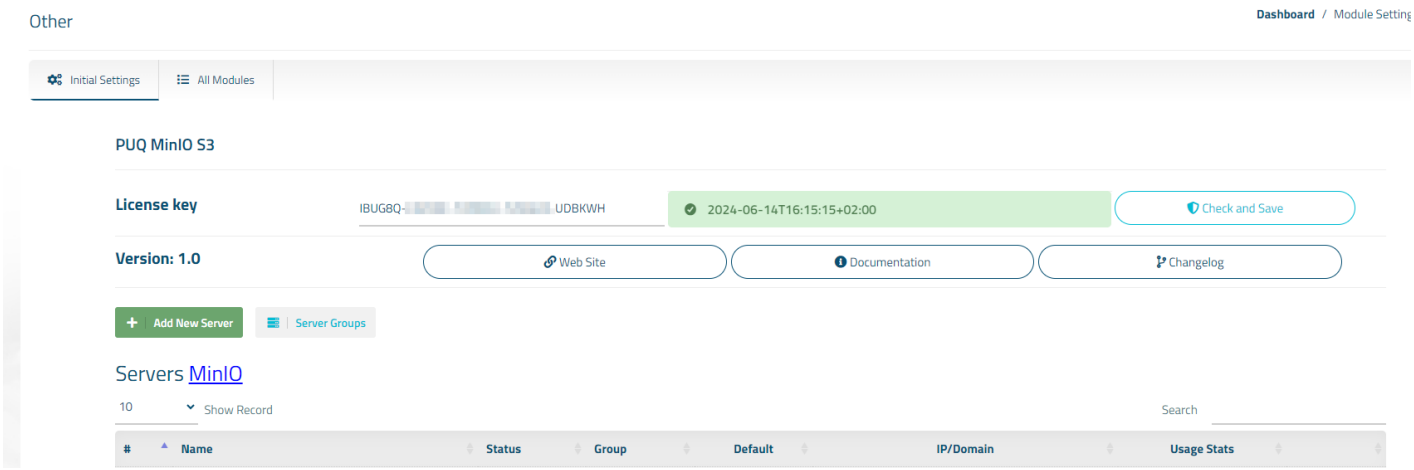


4. On the opened page, enter all the necessary information:

- **Name**: Displayed name of the server.
- **Maximum Number of Accounts**: The number of services that can be on this server.
- **Server Group**: Optionally, choose the server group.
- **IP Address or Domain**: The address of the ownCloud server you are connecting to.
- **Username/Password**: Username and Password on the ownCloud server.
- Check the **SSL** box if you want to use SSL-encrypted connection. If necessary, specify the port and perform a connection test.


Initial Settings
All Modules
PUQ MinIO S3
Go to Back
Add New Server
Server Name
console.minio-test.uuq.pl
Maximum Number of Accounts
100
Server Group
Default
Default
Set as default server in group
IP Address or Domain
console.minio-test.uuq.pl
Username
admin
Password
password
SSL
Connect using SSL
Port
443
Change standard port
Test Connection
Test Connection
Add New Server
Turn Back

3. On the open page, enter the purchased license key for this product and click the '**Check and Save**' button to validate the key and save it.



Service/Product configuration

MinIO S3 module **WISECP**

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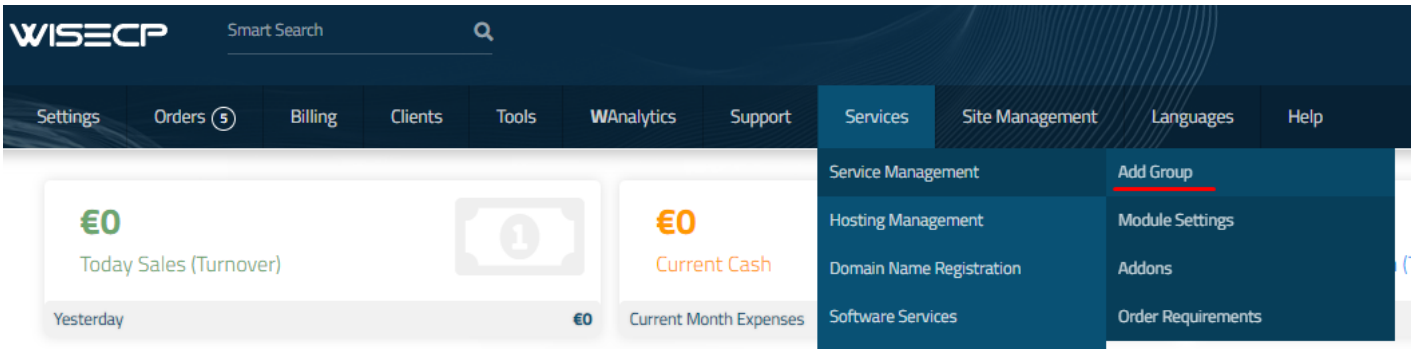
> If you do not have a **Service Group** where you want to place the new service, you need to create a new **Service Group**

1. Log in to the administrative area of your **WISECP**.

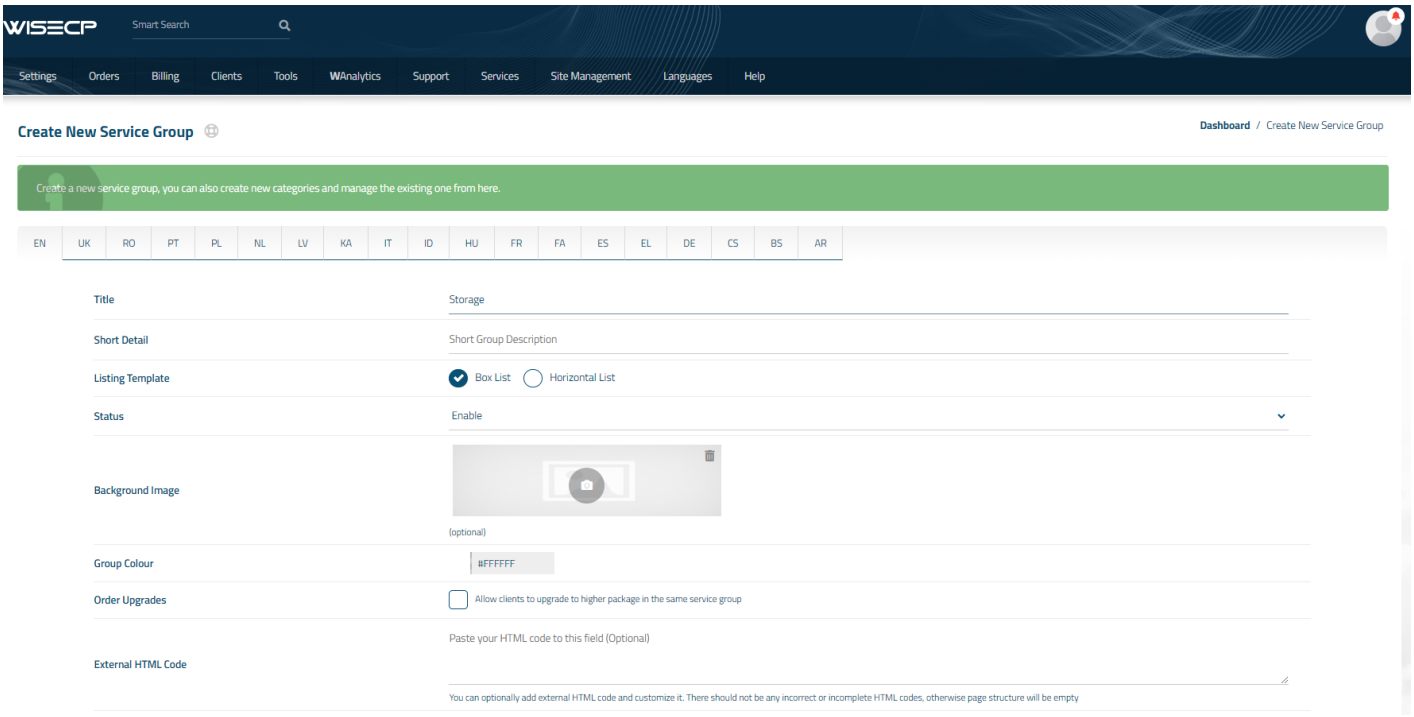
2. Create New Service Group

Go to

```
Services -> Service Management -> Add Group
```



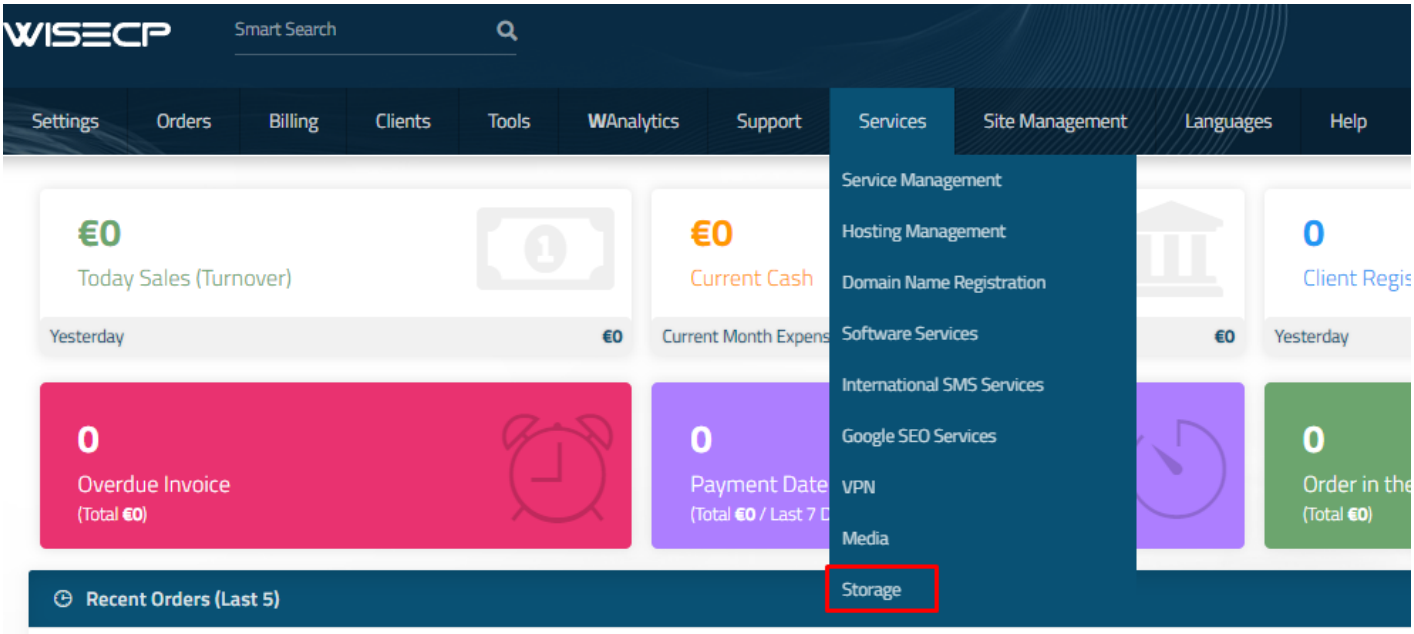
Enter all the necessary data and click the '**Create Group**' button.



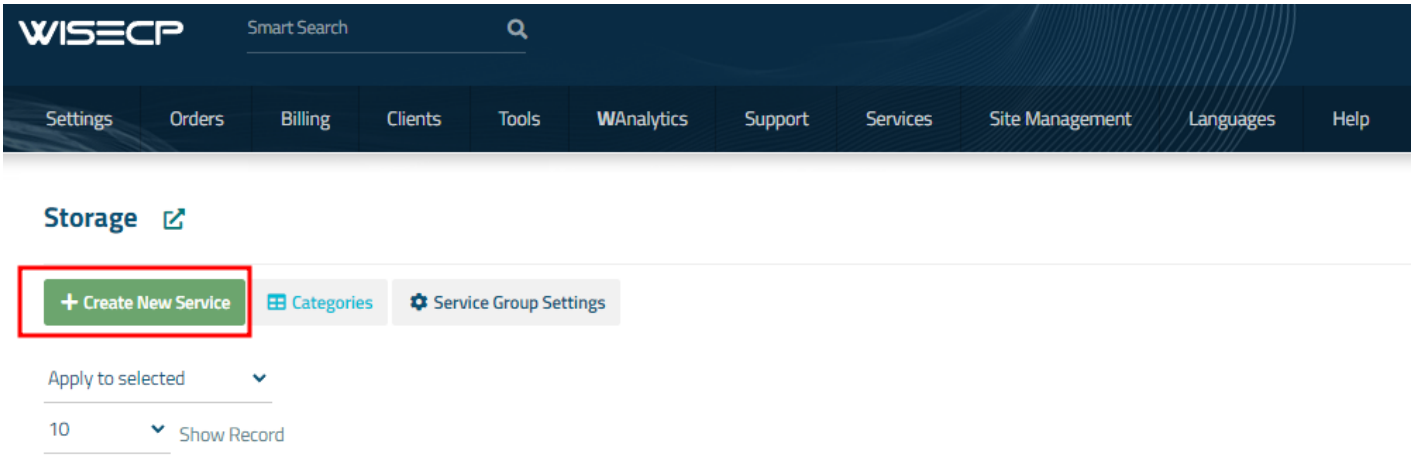
3. Adding a New Service

Go to

```
Services -> our service group where you need to add the new service.
```

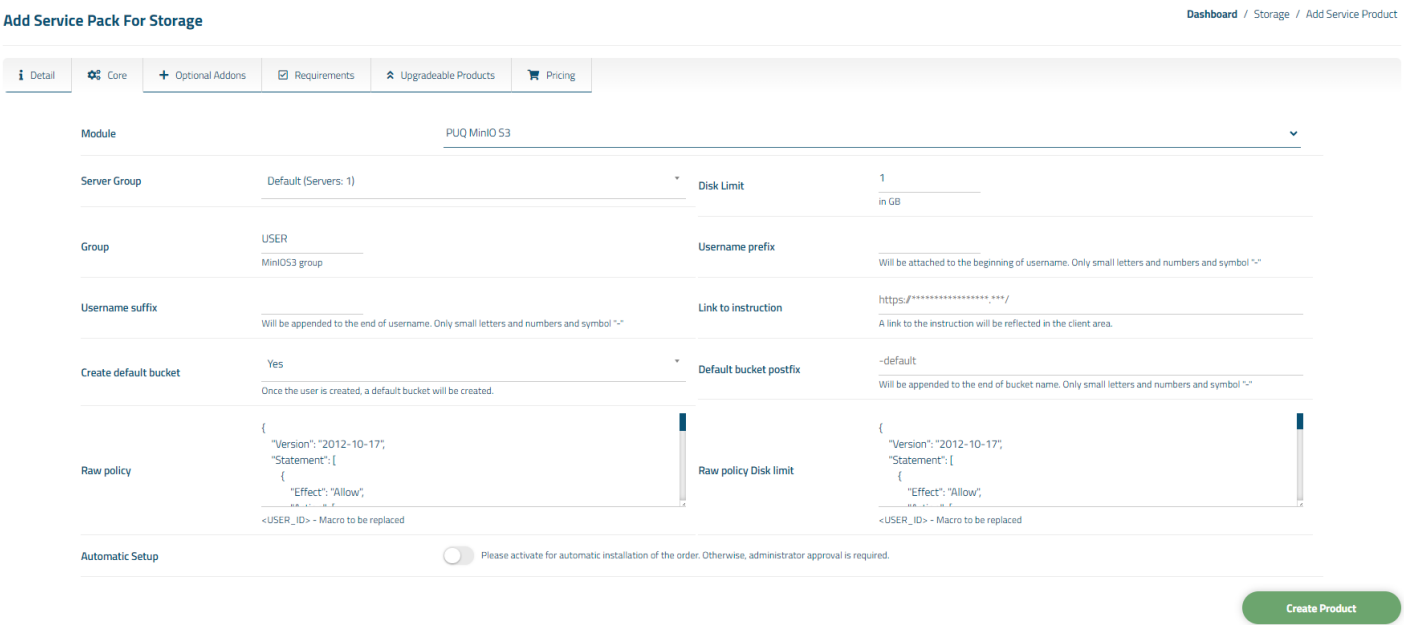


In the opened window, click the '**Create New Service**' button.



On the opened page, enter all the necessary details for your new service and navigate to the '**Core** ' tab.

Select the '**PUQ MinIO S3**' module from the drop-down list of modules.



4. Fill in the configuration options according to your preferences.

- **Server Group** is the group of servers from which a server will be chosen for provisioning the service
- **Disk Limit:** is the disk space quota that is issued to the user
- **Group:** is the group that will be assigned to the user
- **Username Prefix** will be added at the beginning of the username during user creation and is used for uniqueness
- **Username Suffix** will be added at the end of the username during user creation and is also used for uniqueness
- **Create default bucket** To create a bucket by default after creating a user
- **Default bucket postfix** The default bucket will be created with the user's name, followed by this parameter
- **Raw policy** The policy that will be applied to the user while the user has not exceeded usage limits

- **Raw policy Disk limit** The policy that will be applied to the user when the user exceeds usage limits

Setup guide: MinIO S3 setup

MinIO S3 module **WISECP**

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There are many ways to install MinIO. Below we will introduce the installation method from binaries. In the following description, we will provide additional steps beyond the basic installation to set up the service properly. The description will include, among others, setting up the service, nginx proxy and SSL certificates.

> In the current example, we will use the Debian 10 operating system.

1 - Installing and configuring the MinIO server

If you haven't updated the package database recently, update it:

```
sudo apt update
```

Then download the Minio server binary from the official website:

```
wget https://dl.min.io/server/minio/release/linux-amd64/minio
```

> Output
>
> # wget https://dl.min.io/server/minio/release/linux-amd64/minio
> --2022-08-10 10:01:59-- https://dl.min.io/server/minio/release/linux-amd64/minio
> Resolving dl.min.io (dl.min.io)... 178.128.69.202, 138.68.11.125
> Connecting to dl.min.io (dl.min.io)|178.128.69.202|:443... connected.
> HTTP request sent, awaiting response... 200 OK

```
Length: 96968704 (92M) [application/octet-stream]
Saving to: ‘minio’

minio
100%[=================================================>
92,48M 16,7MB/s in 6,8s

2022-08-10 10:02:07 (13,6 MB/s) - ‘minio’ saved [96968704/96968704]
```

Once the download is complete, a file called minio will be in your working directory. Use the following command to get the executable:

```
sudo chmod +x minio
```

Now move the file to the `/usr/local/bin` directory, where the Minio systemd startup script expects to find it:

```
sudo mv minio /usr/local/bin
```

This will allow us to write a service unit file in the next steps of this tutorial to ensure that Minio starts up automatically on system boot.

For security reasons, it is recommended to avoid running the Minio server as root. This will limit the damage that can be done to the system in the event of a security breach. Because the systemd script you'll use in step 2 is looking for an account and group called minio-user, create a new user with that name:

```
sudo useradd -r minio-user -s /sbin/nologin
```

In this command, you used the -s flag to set up `/sbin/nologin` as the shell for minio-user. This is a shell that does not allow the user to log in, which is not necessary for minio-user.

Next, transfer ownership of the Minio binary to **minio-use**r:

```
sudo chown minio-user: minio-user /usr/local/bin/minio
```

Next, you need to create a directory where Minio will store the files. This location will be where you store the buckets that you will use later to organize the objects you store on your Minio server. This tutorial will use the **minio** directory name:

```
sudo mkdir /usr/local/share/minio
```

Give **minio-user** ownership of this directory:

```
sudo chown minio-user:minio-user /usr/local/share/minio
```

Most server configuration files are stored in the `/etc` directory, so this is where you need to create your configuration file:

```
sudo mkdir /etc/minio
```

Give **minio-user** ownership of this directory:

```
sudo chown minio-user:minio-user /etc/minio
```

Use **Nano** or your favorite text editor to create the environment file needed to change the default configuration:

```
sudo nano /etc/default/minio
```

After opening the file, add the following lines to set a few important environment variables in the environment file:

> MINIO_ACCESS_KEY="minio"
> MINIO_VOLUMES="/usr/local/share/minio/"
> MINIO_OPTS="-C /etc/minio --address :9000 --console-address :9001"
> MINIO_SECRET_KEY="miniostorage"

Let's take a look at these variables and the values you have set:

- **MINIO_ACCESS_KEY**: This variable specifies the access key you will use to access the Minio browser user interface.
- **MINIO_SECRET_KEY**: This variable specifies the private key you will use to pass login credentials to the Minio interface. In this tutorial, we'll use the miniostorage value, but we recommend choosing a different, more complex password to keep your server secure.
- **MINIO_VOLUMES**: This variable specifies the storage directory you have created for your buckets.
- **MINIO_OPTS**: This variable determines where and how the server serves the data. The -C flag tells Minio the configuration directory to use, and the --address flag specifies the IP address and port to bind to. If no IP address is specified, Minio will bind to whatever address is set on the server, including localhost and any Docker-related IP addresses, so we recommend that you directly specify the IP address here. You can change the default port 9000 if you like.
  Save and close the environment file after making changes.

You have installed Minio and set a number of important environment variables. Next, you need to configure the server to run as a system service.

2 - Installing the Systemd MinIO startup script

In this step, you will set up the Minio server to manage it as a systemd service.

Create a file `/etc/systemd/system/minio.service`

```
sudo nano /etc/systemd/system/minio.service
```

File contents:

```
[Unit]
Description=MinIO
Documentation=https://docs.min.io
Wants=network-online.target
After=network-online.target
AssertFileIsExecutable=/usr/local/bin/minio

[Service]
WorkingDirectory=/usr/local/

User=minio-user
Group=minio-user

EnvironmentFile=/etc/default/minio
ExecStartPre=/bin/bash -c "if [ -z \"${MINIO_VOLUMES}\" ]; then echo \"Variable MINIO_VOLUMES
not set in /etc/default/minio\"; exit 1; fi"

ExecStart=/usr/local/bin/minio server $MINIO_OPTS $MINIO_VOLUMES

# Let systemd restart this service always
Restart=always

# Specifies the maximum file descriptor number that can be opened by this process
LimitNOFILE=65536
```

```
# Disable timeout logic and wait until process is stopped
TimeoutStopSec=infinity
SendSIGKILL=no

[Install]
WantedBy=multi-user.target

# Built for ${project.name}-${project.version} (${project.name})
```

Then run the following command to reload all **systemd units**:

```
sudo systemctl daemon-reload
sudo systemctl enable minio
```

Now that the systemd script is installed and configured, it's time to start the server.

3 - Starting the MinIO Server

In this step, you will start the server and change the firewall settings to allow access through the browser interface.

Start Minio server:

```
sudo systemctl start minio
```

Then check the Minio's status, the IP address it's bound to, memory usage, and more with the following command:

```
sudo systemctl status minio
```

The result will look like this:

4 - Securing Access to MinIO Server with Let’s Encrypt SSL/TLS Certificate

> You need to replace **yourdomain.com** with your own domain

Certbot is a console based certificate generation tool for Let's Encrypt.

In this recipe, we will generate a Let's Encypt certificate using Certbot. This certificate will then be deployed for use in the MinIO server.

Install Certbot

```
sudo apt update
sudo apt install certbot nginx python3-certbot-nginx -y
```

Set up Nginx proxy with MinIO Server

Proxy all requests

```
rm /etc/nginx/sites-enabled/default
nano /etc/nginx/sites-enabled/minio
```

```
server {
        listen 80 default_server;
        server_name yourdomain.com;
        return 301 https://$host$request_uri;
}


server {
        listen 443 ssl http2;
        server_name yourdomain.com;
```

```
        ssl_certificate /etc/letsencrypt/live/yourdomain.com/fullchain.pem;
        ssl_certificate_key /etc/letsencrypt/live/yourdomain.com/privkey.pem;
        ssl_trusted_certificate /etc/letsencrypt/live/yourdomain.com/cert.pem;

        ssl_session_timeout 20m;
        ssl_ciphers ECDHE-RSA-AES128-GCM-
SHA256:ECDHE:ECDH:AES:HIGH:!NULL:!aNULL:!MD5:!ADH:!RC4;
        ssl_protocols TLSv1 TLSv1.1 TLSv1.2;
        ssl_prefer_server_ciphers on;
        ssl_verify_client off;

        ignore_invalid_headers off;

        client_max_body_size 0;

        proxy_buffering off;

        location / {
                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;
                proxy_set_header Host $http_host;

                proxy_connect_timeout 300;
                proxy_http_version 1.1;
                proxy_set_header Connection "";
                chunked_transfer_encoding off;

                proxy_pass http://localhost:9001;
 }
}
```

Obtain the SSL/TLS Certificate

```
sudo certbot --nginx -d yourdomain.com
```

Restart **nginx** wer server

```
sudo service nginx restart
```

In order for the certificate to be updated automatically, you must add to the crontab

```
crontab -e
```

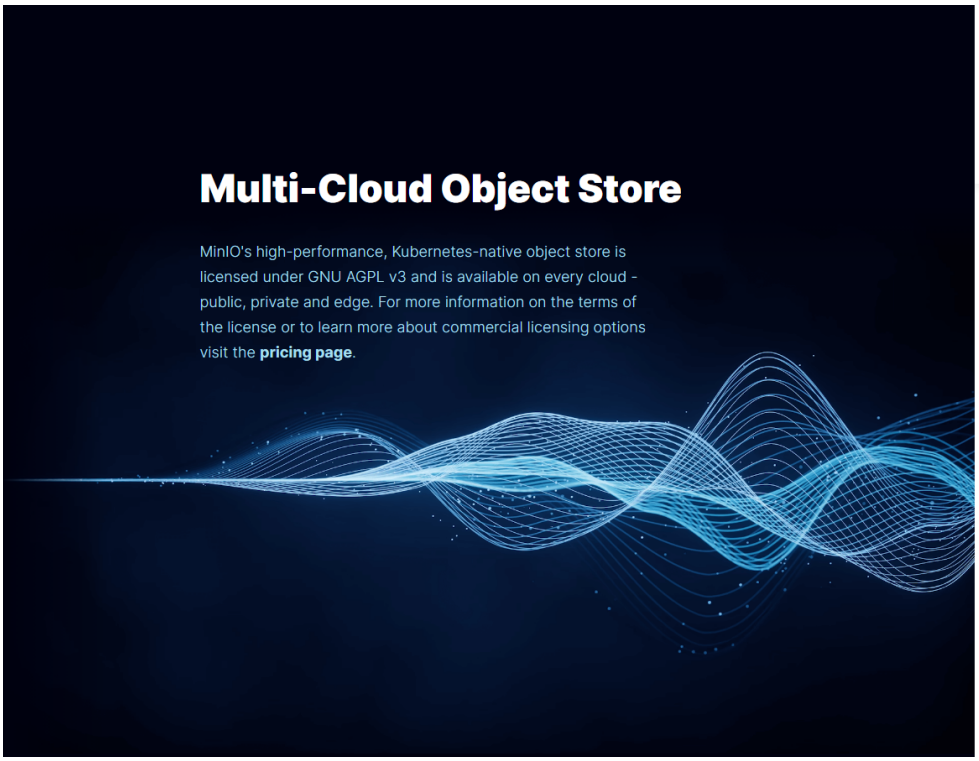
```
0 12 * * * /usr/bin/certbot renew --quiet
```

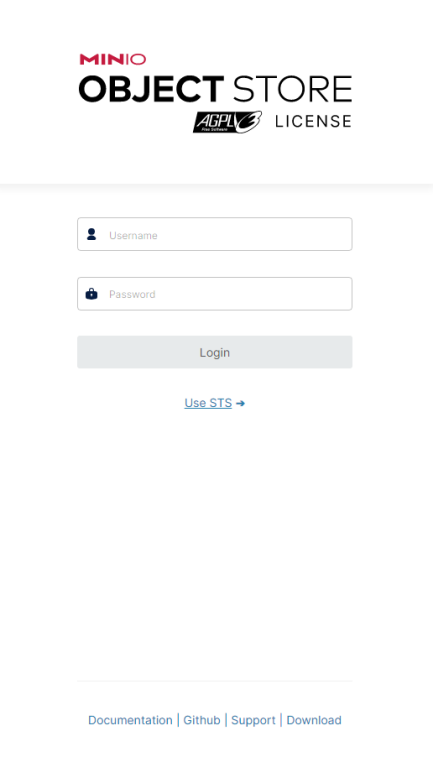
The configuration is now complete.
Login to the server

url: https://yourdomain.com/

For authorization, use the data that was written in the file `/etc/default/minio`

Username: minio
Password: miniostorage





Admin Area

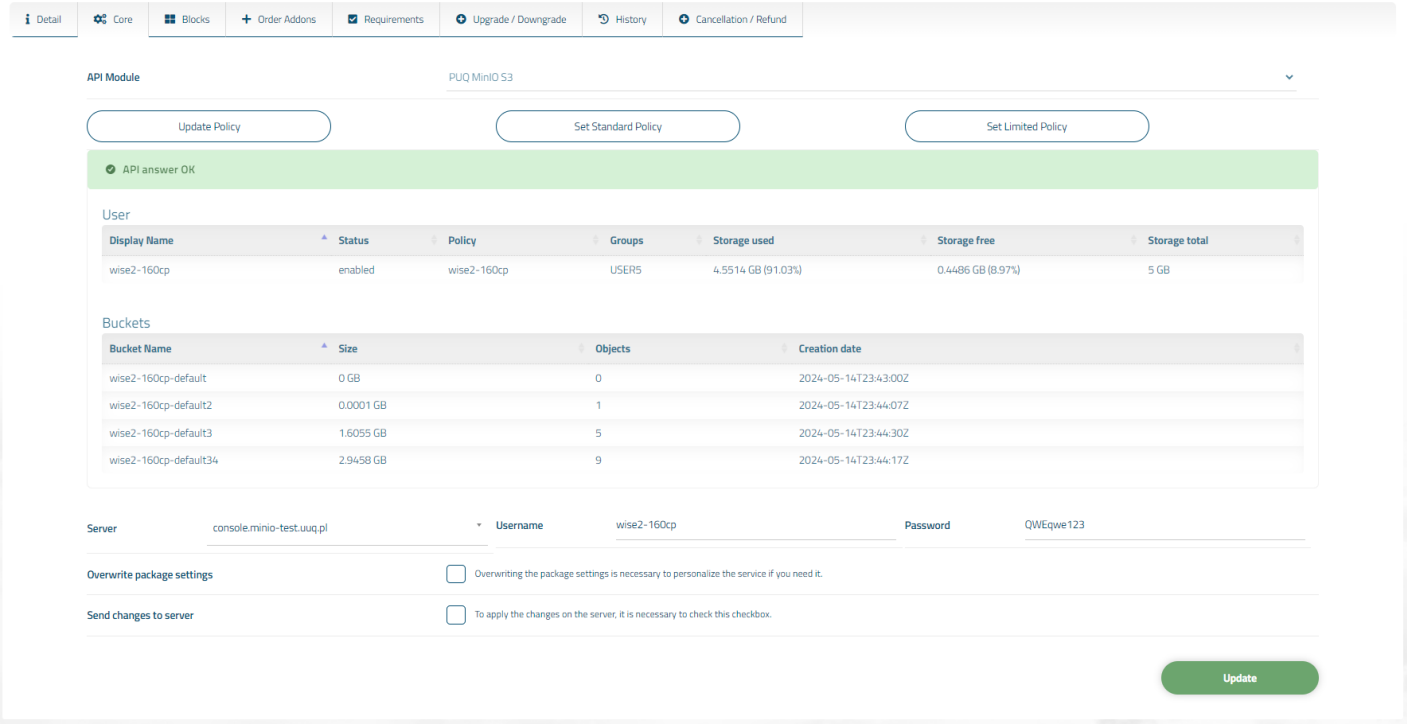
Admin Area

Order Detail

MinIO S3 module WISECP

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Navigate to the service you want to manage, then go to the '**Core**' tab.



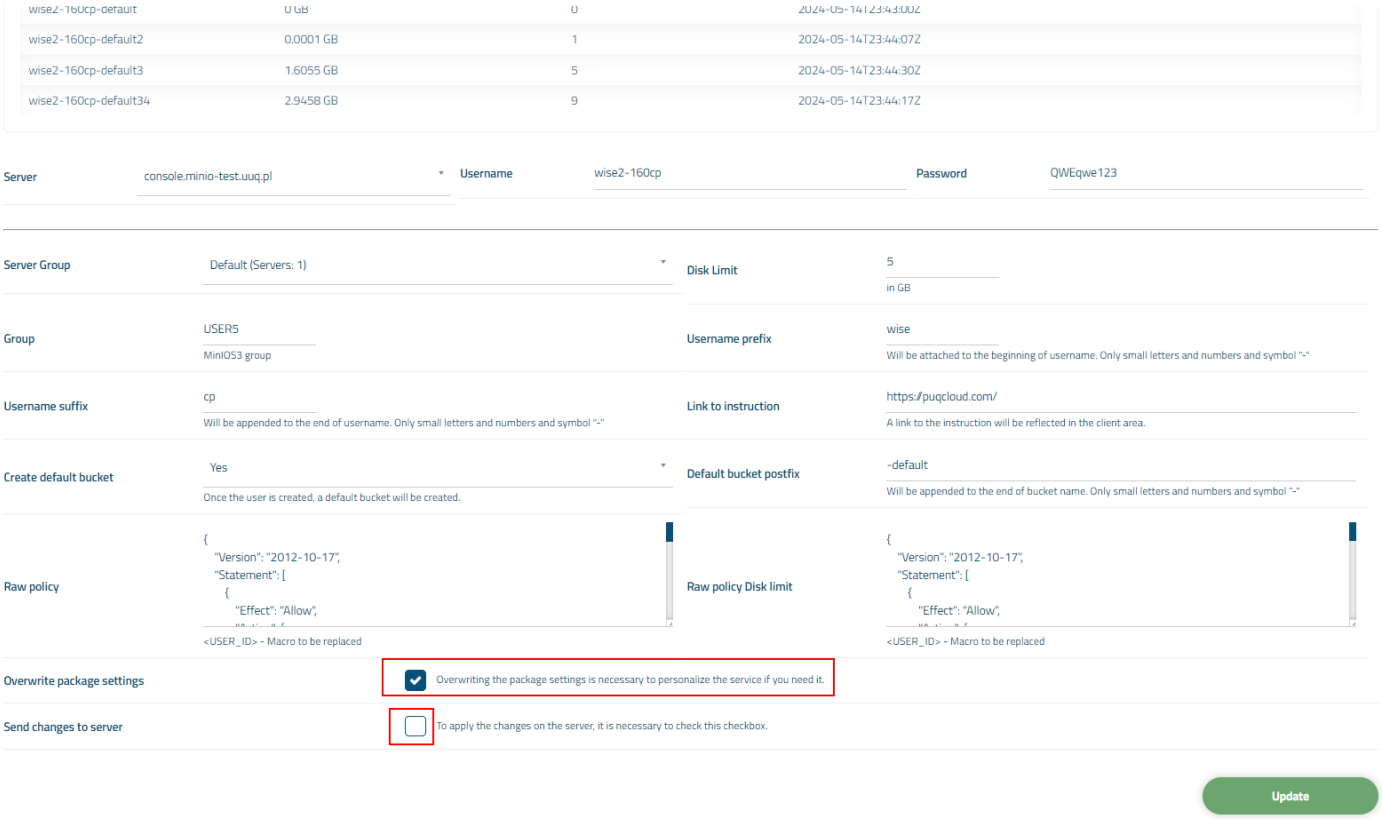
in the opened tab, you have a view of the online status of the service. The available online information includes:

- **Update Policy** button sets the required policy upon clicking, provided that the free space = 0, it sets a limited policy; otherwise, it sets the default policy
- **Set Standard Policy** button sets the standard policy
- **Set Limited Policy** button sets the limited policy
- > Attention, automatic policy change process occurs once per hour, so after the policy is changed forcibly, the policy will return to the correct state.
- Connection status to the API

- Information about user account on the MinIO server
- Diagnostic information about the account
- List of buckets and their size and contents

Also, below are fields with the client's personal data, such as Username, Password, Server

You can also individually override package options for the client by checking the '**Overwrite package settings**' box.



Note: When changing the Server Group, Server fields, make sure you have a user with the username as specified in the 'Username' field pre-created on the new server. Otherwise, you will need to recreate the service for your client.

Client Area

Client Area

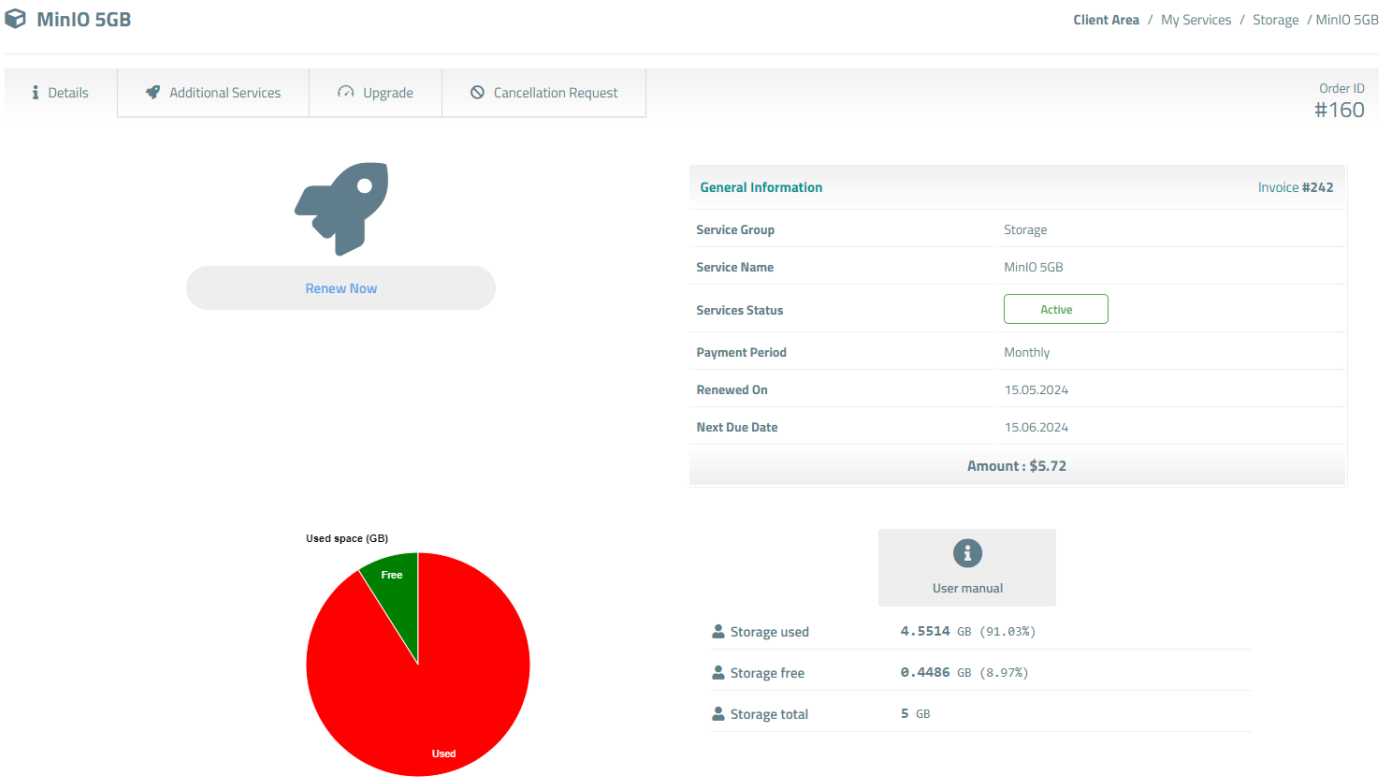
Product Home Screen

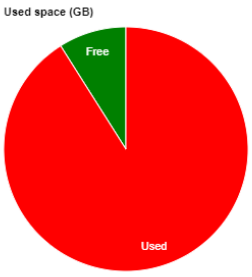
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On the product's homepage, there is information about the product:

- Metrics of occupied and free space
- A circular chart showing space occupancy
- Username and password
- Password can be changed and saved by clicking the Save button
- Also present is a list of all buckets belonging to the client.





User manual

Storage used	**4.5514** GB (91.03%)
Storage free	**0.4486** GB (8.97%)
Storage total	**5** GB

Web interface address https://console.minio-test.uuq.pl/

Username **wise2-160cp**

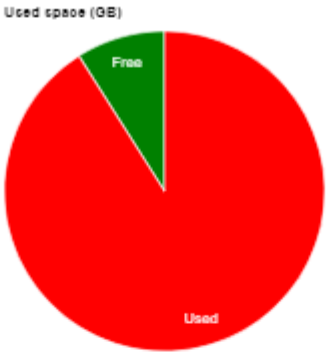
Password ••••••••••

Save

Buckets

Bucket Name	Size
wise2-160cp-default	0GB
wise2-160cp-default2	0.0001GB
wise2-160cp-default3	1.6055GB
wise2-160cp-default34	2.9458GB

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