

Installation and Configuration Guide

Step-by-step instructions for installing, configuring, and setting up the MinIO S3 WHMCS module, including MinIO server preparation, WHMCS integration, email templates, and product configuration.

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WHMCS Installation and Update

MinIO S3 module **WHMCS**

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System requirements

Requirement	Minimum / Supported Version
WHMCS	8.x+, 9.x+.
PHP	7.4, 8.1, 8.2, 8.3, 8.4
ionCube Loader	v15+
MinIO Server	<code> RELEASE. 2025-04-22T22: 12: 26Z </code> or lower

“ **[!IMPORTANT] MinIO Server Version:** The module works exclusively with MinIO server version `|RELEASE. 2025-04-22T22: 12: 26Z|` or lower. Versions newer than this release are not supported.

ionCube Loader: The module uses ionCube encoding. Make sure ionCube Loader is installed and active on your server.

Download

“ **Note:** The module now uses **ionCube 15**, which provides universal out-of-the-

box support for all encodings across modern PHP runtimes.

All versions can be found at this link:

https://download.puqcloud.com/WHMCS/servers/PUQ_WHMCS-MinIO-S3/

Older module versions for WHMCS 8 are available in the archive directory:

https://download.puqcloud.com/WHMCS/servers/PUQ_WHMCS-MinIO-S3/archive/

1. Download the latest version of the module directly to your server:

```
wget https://download.puqcloud.com/WHMCS/servers/PUQ_WHMCS-MinIO-S3/PUQ_WHMCS-MinIO-S3-latest.zip
```

2. Unzip the archive:

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

Installation

Upload files

Copy the `puqMinIOS3` directory from the extracted archive to the WHMCS servers module directory:

```
cp -r puqMinIOS3 /path/to/whmcs/modules/servers/
```

Or target path:

```
WHMCS_WEB_DIR/modules/servers/puqMinIOS3
```

Once the files are uploaded, proceed to the configuration chapter to set up your server and product.

Update

The update procedure is the same as installation — replace the existing files with the new version:

1. Download the latest version as described in the Download section.
2. Unzip the archive.
3. Replace the existing `WHMCS_WEB_DIR/modules/servers/puqMinIOS3` directory with the new one.
4. Verify the version number in the module interface matches the new release.

Setup guide: MinIO S3 setup

Section 1 — Installing and configuring the MinIO server

“ **[!IMPORTANT] Supported MinIO Version:** The module works exclusively with MinIO server version `RELEASE.2025-04-22T22:12:26Z` or lower.

Update packages and download the compatible MinIO binary:

```
sudo apt update
# Download the supported release (RELEASE.2025-04-22T22:12:26Z):
wget https://dl.min.io/server/minio/release/linux-amd64/archive/minio.RELEASE.2025-04-22T22-12-26Z -O minio
```

Install the binary and set up the MinIO user:

```
sudo chmod +x minio
sudo mv minio /usr/local/bin
sudo useradd -r minio-user -s /sbin/nologin
sudo chown minio-user:minio-user /usr/local/bin/minio
sudo mkdir /usr/local/share/minio
sudo chown minio-user:minio-user /usr/local/share/minio
sudo mkdir /etc/minio
sudo chown minio-user:minio-user /etc/minio
```

Create the environment configuration file `/etc/default/minio`:

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

Section 2 — Installing the Systemd MinIO startup script

Create the service file `|/etc/systemd/system/minio.service|`:

```
[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

Restart=always

LimitNOFILE=65536

TimeoutStopSec=infinity
SendSIGKILL=no

[Install]
WantedBy=multi-user.target
```

Section 3 — Starting the MinIO Server

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

Section 4 — Securing Access to MinIO Server with Let's Encrypt SSL/TLS Certificate

Install certbot and nginx:

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

Create the nginx configuration file `/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;
}
}

```

Remove the default nginx config and generate SSL certificate:

```

rm /etc/nginx/sites-enabled/default
sudo certbot --nginx -d yourdomain.com
sudo service nginx restart

```

Add certificate auto-renewal to crontab:

```

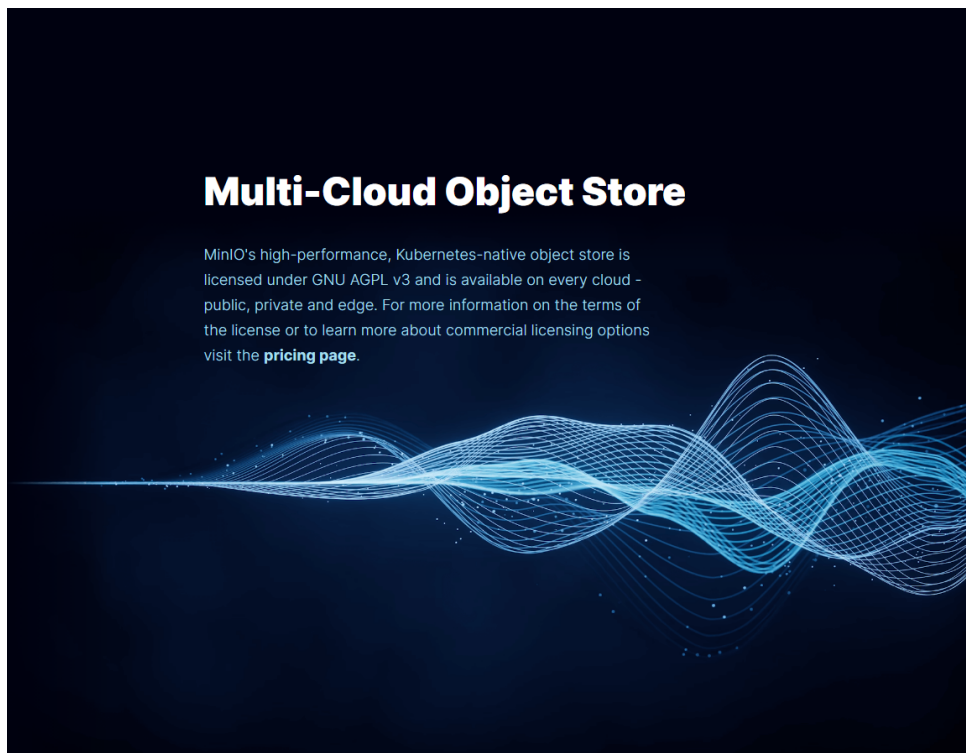
0 12 * * * /usr/bin/certbot renew --quiet

```

Default Login Credentials

After installation, you can access the MinIO console at `https://yourdomain.com`:

- **Username:** `minio`
- **Password:** `miniostorage`



04-minio-setup.png



Login

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Setup guide: WHMCS setup

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Step 1 — Add server in WHMCS

Create a new MinIO S3 server in WHMCS:

Navigate to: **System Settings** → **Products/Services** → **Servers**

1. Click **Add New Server**
2. Enter the correct **Name** and **Hostname**
3. In the **Server Details** section, select the **PUQ MinIO S3** module and enter the correct username and password for the MinIO web interface
4. Click the **Test connection** button to verify

Edit Server

Name	<input background-color:="" black;"="" color:="" red;="" type="text" value="s3minio- [REDACTED].com"/>
Hostname	<input background-color:="" black;"="" color:="" red;="" type="text" value="s3minio- [REDACTED].com"/>
IP Address	
Assigned IP Addresses (One per line)	
Monthly Cost	0.00
Datacenter/NOC	
Maximum No. of Accounts	200
Server Status Address	To display this server on the server status page, enter the full path to the server status folder (required to be uploaded to each server you want to monitor) - eg. https://www.example.com/status/
Enable/Disable	☐ Tick to disable this server

05-add-server-1.png

Server Details

Module	PUQ MinIO S3 Test Connection
	✓ Connection successful. Some values have been auto-filled.
Username	minioadmin
Password	
Access Hash	
Secure	☒ Tick to use SSL Mode for Connections
Port	443 ☐ Override with Custom Port

06-add-server-2.png

Step 2 — Create Product

Navigate to: **System Settings** → **Products/Services** → **Create a New Product**

In the **Module Settings** section, select the **PUQ MinIO S3** module and configure the product options.

Edit Server

Name	<input background-color:="" black;"="" color:="" red;="" type="text" value="s3minio- XXXXXXXXXX.com"/>
Hostname	<input background-color:="" black;"="" color:="" red;="" type="text" value="s3minio- XXXXXXXXXX.com"/>
IP Address	
Assigned IP Addresses (One per line)	
Monthly Cost	0.00
Datacenter/NOC	
Maximum No. of Accounts	200
Server Status Address	To display this server on the server status page, enter the full path to the server status folder (required to be uploaded to each server you want to monitor) - eg. https://www.example.com/status/
Enable/Disable	☐ Tick to disable this server

05-add-server-1.png

Email Template

(puqMinIOS3 Notification disk limit)

Create an email template for customer notifications when disk usage approaches the limit.

Navigate to: **System Settings → Email Templates → Create New Email Template**

Template configuration

Parameter	Value
Email Type	Product/service
Unique Name	puqMinIOS3 Notification disk limit

Email Subject

Disk space usage {\$disk_used_percentage} % - {\$username}

Email Body

Dear {\$client_name},

This letter informs you that the disk space usage limit is coming to an end.

Product/Service: {\$service_product_name}

Due Date: `{{service_next_due_date}}`

Username: `{{username}}`

Disk limit: `{{disk_limit_bytes*$unit_coefficient}}` `{{unit}}`

Disk used: `{{disk_used_unit}}` `{{unit}}` (`{{disk_used_percentage}}` %)

Disk free: `{{disk_free_unit}}` `{{unit}}` (`{{disk_free_percentage}}` %)

`{{signature}}`

Available template variables

Variable	Description
<code>{{username}}</code>	MinIO S3 account username
<code>{{disk_limit_bytes*\$unit_coefficient}}</code>	Total disk space limit
<code>{{disk_used_unit}}</code>	Used disk space
<code>{{disk_free_unit}}</code>	Free disk space
<code>{{disk_used_percentage}}</code>	Used disk space percentage
<code>{{disk_free_percentage}}</code>	Free disk space percentage
<code>{{unit}}</code>	Disk space unit (MB, GB, TB, PB)

“ **Note:** Standard WHMCS merge fields are also available in this template.

Email Type

Product/Service

Unique Name

puqMinIOS3 Notification disk limit

Cancel

Create

07-email-

template-1.png

Subject: Disk space usage {\${disk_used_percentage}} % - {\${username}}

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Dear { \$client_name },

This letter informs you that the disk space usage limit is coming to an end.

Product/Service: { \$service_product_name }

Due Date: { \$service_next_due_date }

Username: { \$username }

Disk limit: { \$disk_limit_bytes * \$unit_coefficient } { \$unit }

Disk used: { \$disk_used_unit } { \$unit } ({ \$disk_used_percentage } %)

Disk free: { \$disk_free_unit } { \$unit } ({ \$disk_free_percentage } %)

{ \$signature }

P » STRONG

55 WORDS POWERED BY TINYMCE

08-email-template-2.png

Email Template

(puqMinIOS3 service Suspension Notification disk limit)

Create an email template for customer notifications when the S3 account is suspended due to exceeding the disk limit.

Navigate to: **System Settings → Email Templates → Create New Email Template**

Template configuration

Parameter	Value
Email Type	Product/service
Unique Name	puqMinIOS3 service Suspension Notification disk limit

Email Subject

Suspension Information - {\$username}

Email Body

Dear {\$client_name},

This email informs you that the S3 account has been disabled due to running out of free space.

It is also possible to upgrade to a package with more space.

Product/Service: `{{service_product_name}}`

Due Date: `{{service_next_due_date}}`

Username: `{{username}}`

Disk limit: `{{disk_limit_bytes*$unit_coefficient}}` `{{unit}}`

Disk used: `{{disk_used_unit}}` `{{unit}}` (`{{disk_used_percentage}}` %)

Disk free: `{{disk_free_unit}}` `{{unit}}` (`{{disk_free_percentage}}` %)

`{{signature}}`

Available template variables

Variable	Description
<code>{{username}}</code>	MinIO S3 account username
<code>{{disk_limit_bytes*\$unit_coefficient}}</code>	Total disk space limit
<code>{{disk_used_unit}}</code>	Used disk space
<code>{{disk_free_unit}}</code>	Free disk space
<code>{{disk_used_percentage}}</code>	Used disk space percentage
<code>{{disk_free_percentage}}</code>	Free disk space percentage
<code>{{unit}}</code>	Disk space unit (MB, GB, TB, PB)

“ **Note:** Standard WHMCS merge fields are also available in this template.

Email Type

Product/Service

Unique Name

puqMinIOS3 service Suspension Notification disk limit

Cancel

Create

09-email-

template-suspension-1.png

Subject: Suspension Information - {\$username}

File	Edit	View	Insert	Format	Table	Help								
Paragraph	Verdana	11pt	B	<i>I</i>	S	<u>U</u>	<u>A</u>	<u>A</u>						

Dear {\$client_name},

This email informs you that the S3 account has been disabled due to running out of free space.

It is also possible to upgrade to a package with more space.

Product/Service: {\$service_product_name}
Due Date: {\$service_next_due_date}

Username: {\$username}

Disk limit: {\$disk_limit_bytes*\$unit_coefficient} {\$unit}
Disk used: {\$disk_used_unit} {\$unit} ({\$disk_used_percentage} %)
Disk free: {\$disk_free_unit} {\$unit} ({\$disk_free_percentage} %)

{\$signature}

P

70 WORDS POWERED BY TINYMCE

10-email-template-suspension-2.png

Add server (MinIO S3)

Add a new server to the system WHMCS

Navigate to: **System Settings** → **Servers** → **Add New Server**

Step 1 — General settings

Enter the correct **Name** and **Hostname** for your MinIO S3 server.

Edit Server

Name	<input background-color:="" black;"="" color:="" red;="" type="text" value="s3minio- XXXXXXXXXX.com"/>
Hostname	<input background-color:="" black;"="" color:="" red;="" type="text" value="s3minio- XXXXXXXXXX.com"/>
IP Address	
Assigned IP Addresses (One per line)	
Monthly Cost	0.00
Datacenter/NOC	
Maximum No. of Accounts	200
Server Status Address	To display this server on the server status page, enter the full path to the server status folder (required to be uploaded to each server you want to monitor) - eg. https://www.example.com/status/
Enable/Disable	☐ Tick to disable this server

05-add-server-1.png

Step 2 — Module settings

In the **Server Details** section:

1. Select the **PUQ MinIO S3** module
2. Enter the correct **username** and **password** for the MinIO web interface
3. Click the **Test connection** button to verify the connection

Server Details

Module	PUQ MinIO S3 Test Connection
	✓ Connection successful. Some values have been auto-filled.
Username	minioadmin
Password	
Access Hash	
Secure	☒ Tick to use SSL Mode for Connections
Port	443 ☐ Override with Custom Port

06-add-server-2.png

“ **Note:** The MinIO user must have administrator privileges to manage users, policies, and buckets via the API.

Product Configuration

Add new product to WHMCS

Navigate to: **System Settings** → **Products/Services** → **Create a New Product**

In the **Module Settings** section, select the **PUQ MinIO S3** module.

Configuration parameters

Parameter	Description
License key	A pre-purchased license key for the PUQ MinIO S3 module. For the module to work correctly, the key must be active
Unit	Packet disk space units (MB, GB, TB, PB)
Disk space size	Disk size in this product (set to 0 for unlimited)
Notification disk limit email template	Email template that will be sent when the disk quota is exceeded in %
Notification, used disk space X %	Sets a percentage parameter (1-100, default 90), after exceeding this parameter a notification will be sent to the user
Group	The group that will be assigned to the user on the server side of the MinIO S3
Raw Policy	The policy that is assigned to the user during creation on the server
Suspend exceeding disk limit email template	The template of the letter that will be sent to the client if his disk limit is 100% or less 100%
Raw policy Disk limit	The policy that will be applied to the client when the client runs out of space
Save usage history (days)	The number of days it takes to save user disk usage statistics
Link to instruction	Link to the instruction, if filled out, it will be reflected in the client area
Default Bucket	Options to enable or disable the creation of a default bucket, and also set its prefix

Parameter	Description
Client Area	Client zone settings — show or not show the password in the client zone, type how to show the password

Username rule

Default: `{client_id}-{service_id}`

Macro	Description
<code>{client_id}</code>	Client ID
<code>{service_id}</code>	Service ID
<code>{unixtime}</code>	Current Unix timestamp
<code>{date}</code>	Current date (YYYY-MM-DD)
<code>{time}</code>	Current time (HH-MM-SS)
<code>{random_digit_x}</code>	Random digit string of length x
<code>{random_letter_x}</code>	Random letter string of length x

Password rule

Default: `12: 123456789QAZWSXEDCRFVTGBYHNUJMIKqazwsxedcrfvtgbyhnujmikolp`

Format: `length: charset` — where length is the password length and charset is the set of characters to use.

Raw Policy (Standard)

The policy that is assigned to the user during creation on the server:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
```

```

    "Effect": "Allow",
    "Action": [
        "admin: Heal",
        "admin: SetBucketTarget",
        "admin: TopLocksInfo",
        "admin: DataUsageInfo",
        "admin: GetBucketQuota",
        "admin: GetBucketTarget"
    ],
    "Resource": [
        "arn:aws:s3:: <USER_ID>*"
    ]
},
{
    "Effect": "Allow",
    "Action": [
        "s3: *"
    ],
    "Resource": [
        "arn:aws:s3:: <USER_ID>*"
    ]
}
]
}

```

Raw Policy Disk Limit

The policy that will be applied to the client when the client runs out of space:

```

{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": [
                "admin: Heal",
                "admin: SetBucketTarget",

```

```

        "admin: TopLocksInfo",
        "admin: DataUsageInfo",
        "admin: GetBucketQuota",
        "admin: GetBucketTarget"
    ],
    "Resource": [
        "arn: aws: s3: :: <USER_ID>*"
    ]
},
{
    "Effect": "Allow",
    "Action": [
        "s3: GetObject",
        "s3: DeleteObject",
        "s3: ListBucket"
    ],
    "Resource": [
        "arn: aws: s3: :: <USER_ID>*"
    ]
}
]
}

```

“ **Important:** Policy recalculation occurs once a day during the collection of server statistics (UpdateServerUsage).

11-product-configuration.png