

Installation and configuration guide

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Basic concepts and requirements

Docker n8n module **WHMCS**

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Before you start, it is important to read and familiarize yourself with the following articles at this link:

<https://doc.puq.info/books/docker-modules>

The **WHMCS Docker n8n module** is part of the **WHMCS Docker module series** developed by **PUQcloud**. This module enables service providers to offer **n8n Docker containers** as a service to their clients, allowing for seamless automation and integration.

The system consists of three core components:

WHMCS Module

The **core component**, installed in WHMCS, manages service provisioning and automation from the WHMCS side.

Debian 12 Server

A server running **Debian 12** with the following pre-installed:

-  **Docker** – For container management
-  **SQLite3** – For lightweight database operations
-  **Apache2-utils** – For authentication and performance enhancements

We have prepared instructions for installing and configuring Docker

<https://doc.puq.info/books/docker-modules/page/installing-docker-for-puqcloud-modules>

n8n Server

This server facilitates communication between the WHMCS module and the Docker server, ensuring smooth workflow execution.

To explore n8n's full potential, visit the [official n8n website](#) for documentation, tutorials, and community support.

Key Features & Concepts

Workflow Automation

n8n provides a **graphical workflow builder**, allowing users to automate various tasks, such as:

- ✓ **Sending notifications**
- ✓ **Configuring firewalls** on external routers
- ✓ **Managing DNS settings**
- ✓ **Custom automation processes** tailored to specific needs

Flexibility & Customization

The module offers **personalized settings** and supports **elastic automation**, giving clients full control over their n8n workflows.

WHMCS setup (install/update)

Docker n8n module **WHMCS**

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Module is coded ionCube v13

Supported php version:

- php 7.4 WHMCS 8.11.0 -
- php 8.1 WHMCS 8.11.0 +
- php 8.2 WHMCS 8.11.0 +

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

1. Download the latest version of the module.

PHP 8.2

```
wget http://download.puqcloud.com/WHMCS/servers/PUQ_WHMCS-Docker-n8n/php82/PUQ_WHMCS-Docker-n8n-latest.zip
```

PHP 8.1

```
wget http://download.puqcloud.com/WHMCS/servers/PUQ_WHMCS-Docker-n8n/php81/PUQ_WHMCS-Docker-n8n-latest.zip
```

PHP 7.4

```
wget http://download.puqcloud.com/WHMCS/servers/PUQ_WHMCS-Docker-n8n/php74/PUQ_WHMCS-Docker-n8n-latest.zip
```

All versions are available via link:

https://download.puqcloud.com/WHMCS/servers/PUQ_WHMCS-Docker-n8n/

2. Unzip the archive with the module.

```
unzip PUQ_WHMCS-Docker-n8n-latest.zip
```

3. Copy and Replace "puqDockerN8N" from "PUQ_WHMCS-Docker-n8n" to "WHMCS_WEB_DIR/modules/servers/"

Preparing Docker Server

Docker n8n module **WHMCS**

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To install the Docker server for this module, please follow the instructions at the following link:

<https://doc.puq.info/books/docker-modules/page/installing-docker-for-puqcloud-modules>

Setting up n8n workflow

Docker n8n module **WHMCS**

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Overview

The **Docker n8n WHMCS module** uses a specially designed workflow for **n8n** to automate deployment processes. The workflow provides an API interface for the module, receives specific commands, and connects via SSH to a server with Docker installed to perform predefined actions.

Prerequisites

- You must have your own **n8n** server.
- Alternatively, you can use the official **n8n** cloud installations available at: [n8n Official Site](#)

Installation Steps

Install the Required Workflow on n8n

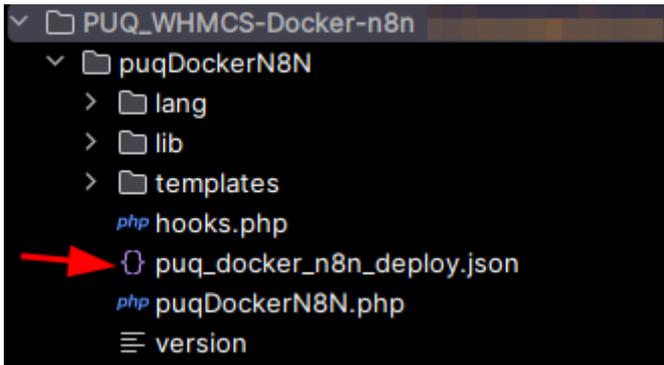
You have two options:

Option 1: Use the Latest Version from the n8n Marketplace

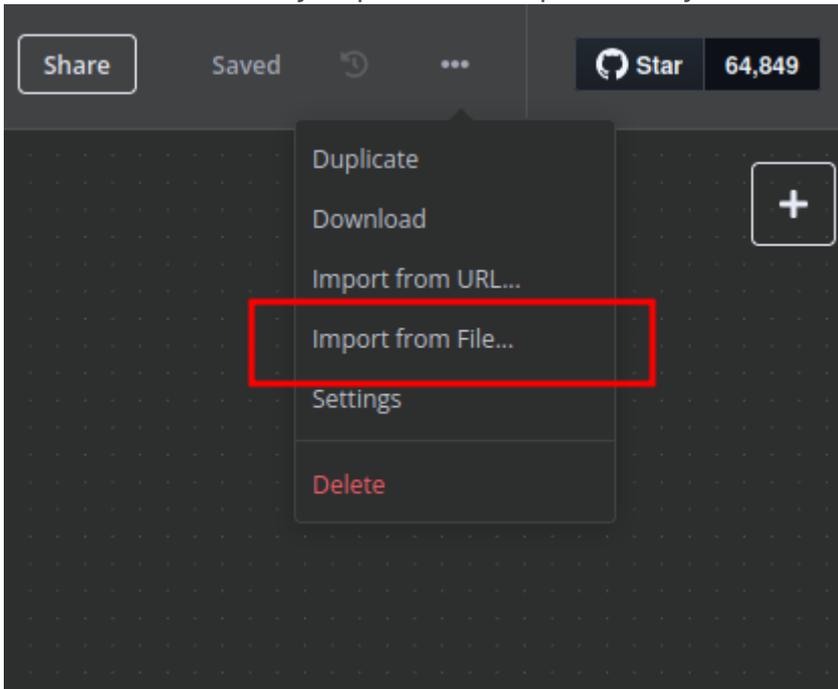
- The latest workflow templates for our modules are available on the official n8n marketplace.
- Visit our profile to access all available templates: [PUQcloud on n8n](#)

Option 2: Manual Installation

- Each module version comes with a workflow template file.



- You need to manually import this template into your n8n server.



n8n Workflow API Backend Setup for WHMCS/WISECP

Configure API Webhook and SSH Access

- Create a **Basic Auth Credential** for the Webhook API Block in n8n.

3. Modify Template Parameters

In the Parameters block of the template, update the following settings:

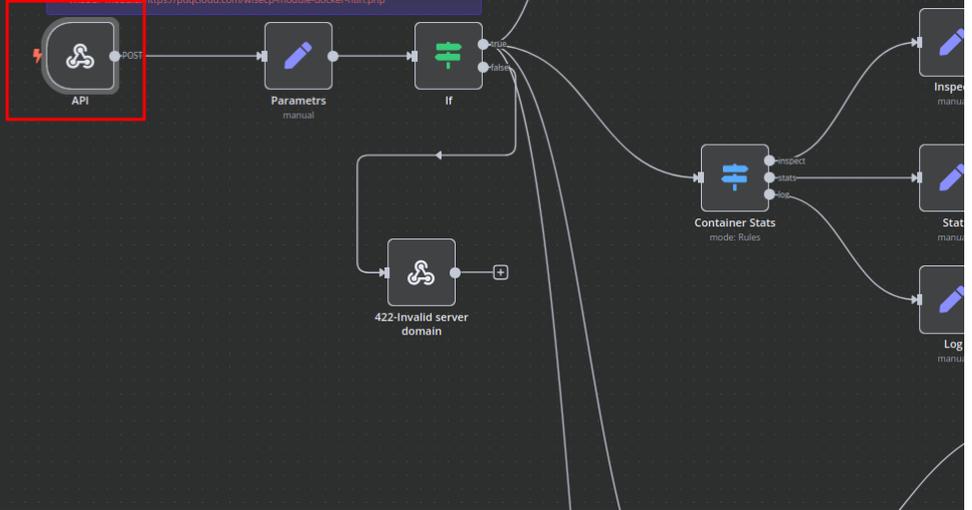
- `server_domain` – must match the domain of the WHMCS/WISECP Docker server.
- `clients_dir` – directory where user data related to Docker and disks will be stored.
- `mount_dir` – default mount point for the container disk (recommended not to change).

Do not modify the following technical parameters:

- `screen_left`
- `screen_right`

Additional Resources

- Full documentation: <https://doc.puq.info/books/docker-n8n-whmcs-module>
- WHMCS module: <https://puqcloud.com/whmcs-module-docker-n8n.php>
- WISECP module: <https://puqcloud.com/wisecp-module-docker-n8n.php>



Pull in events from Webhook

[Listen for test event](#)

Once you've finished building your workflow, run it without having to click this button by using the production webhook URL. [More info](#)

When will this node trigger my flow? ▼

API

[Listen for test event](#)

Parameters Settings Docs

Webhook URLs

Test URL Production URL

POST `https://n8n.puqcloud.com/webhook-test/docker-n8n`

HTTP Methods

POST

Path

docker-n8n

Authentication

Basic Auth

Credential for Basic Auth

Incom API User

+ Create new credential

Options

No properties

Add option

API credential
Basic Auth

Save

Connection

Need help filling out these fields? [Open docs](#)

Sharing

Details

User

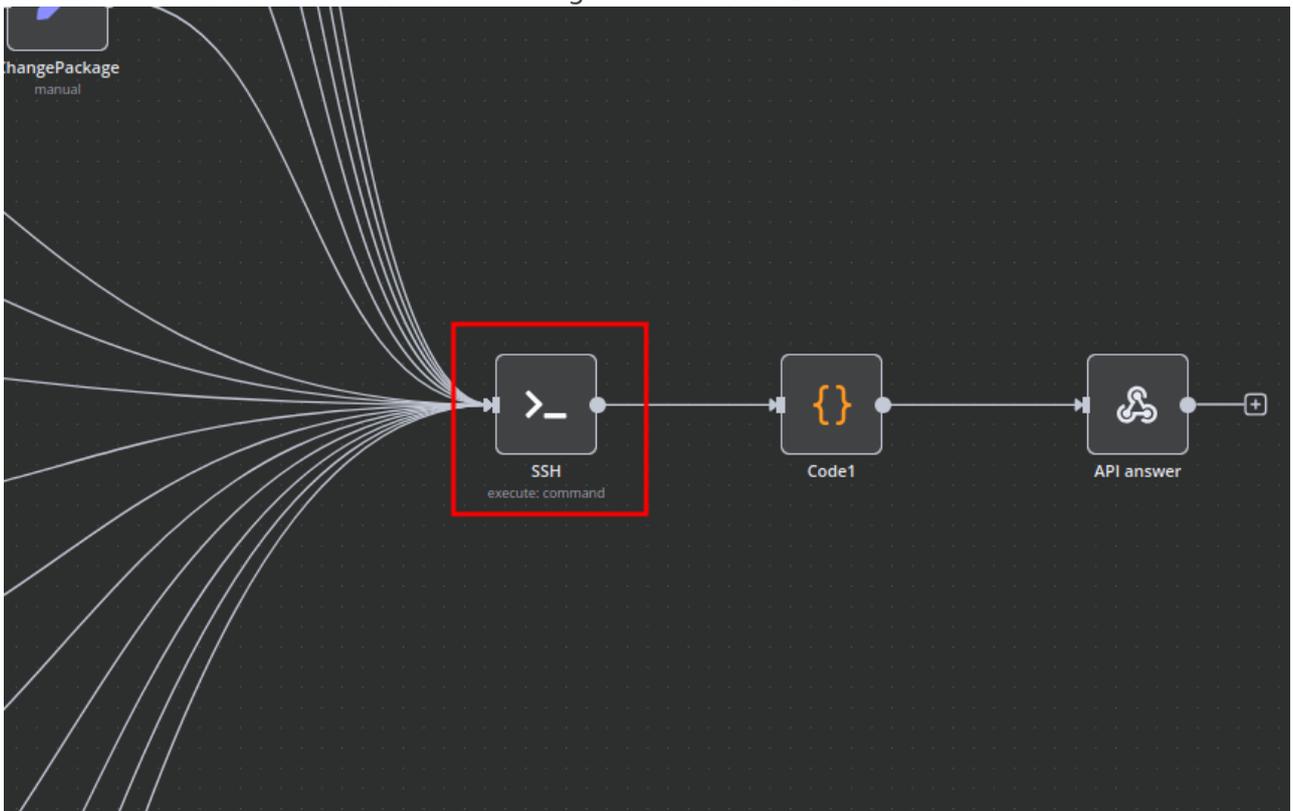
test

Password

.....

Enterprise plan users can pull in credentials from external vaults. [More info](#)

- Create an **SSH Credential** for accessing a server with Docker installed.



> SSH

Test step

Parameters

Settings

Docs

Credential to connect with

d01-test.uuq.pl-puq

d01-test.uuq.pl-puq
SSH Password

+ Create new credential

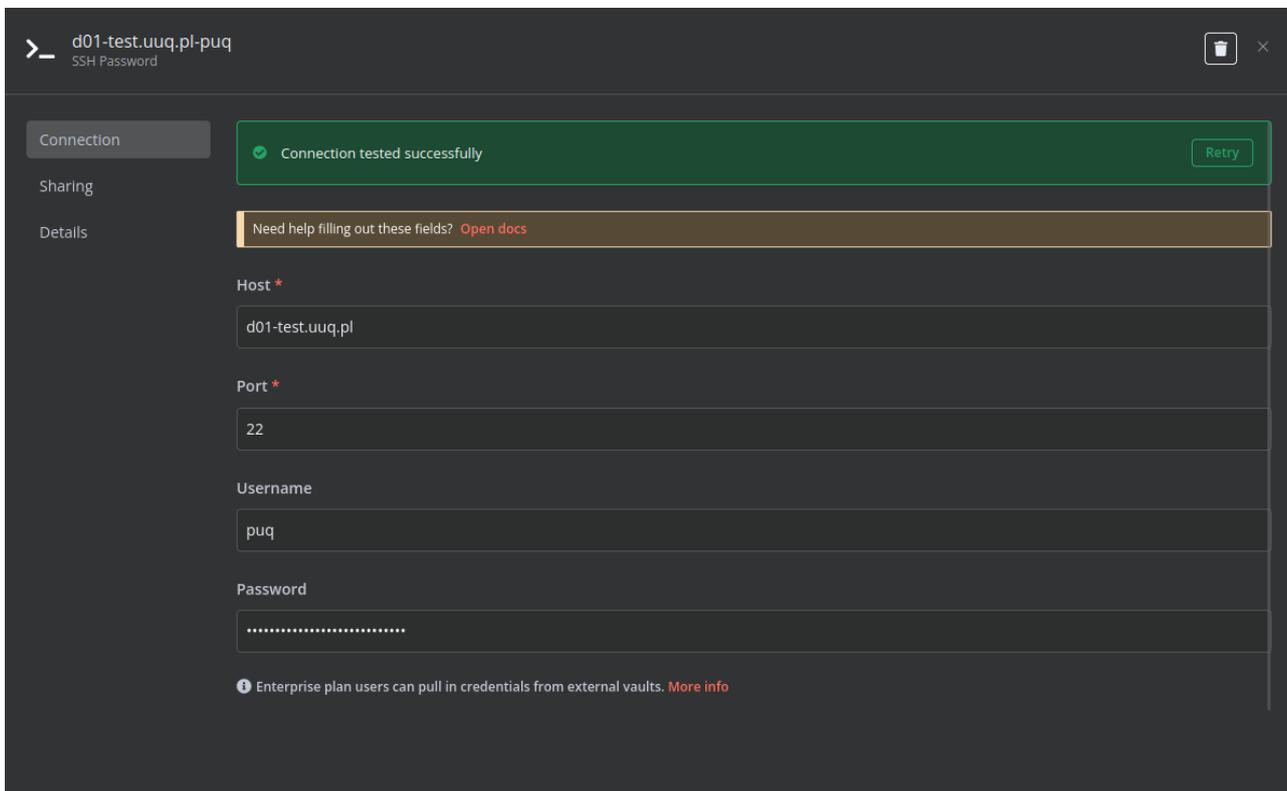
Execute

Command

fx {{ \$json.sh }}

Working Directory

fx /



Modify Template Parameters

In the **Parameters** block of the template, update the following settings:

3. Modify Template Parameters

In the Parameters block of the template, update the following settings:

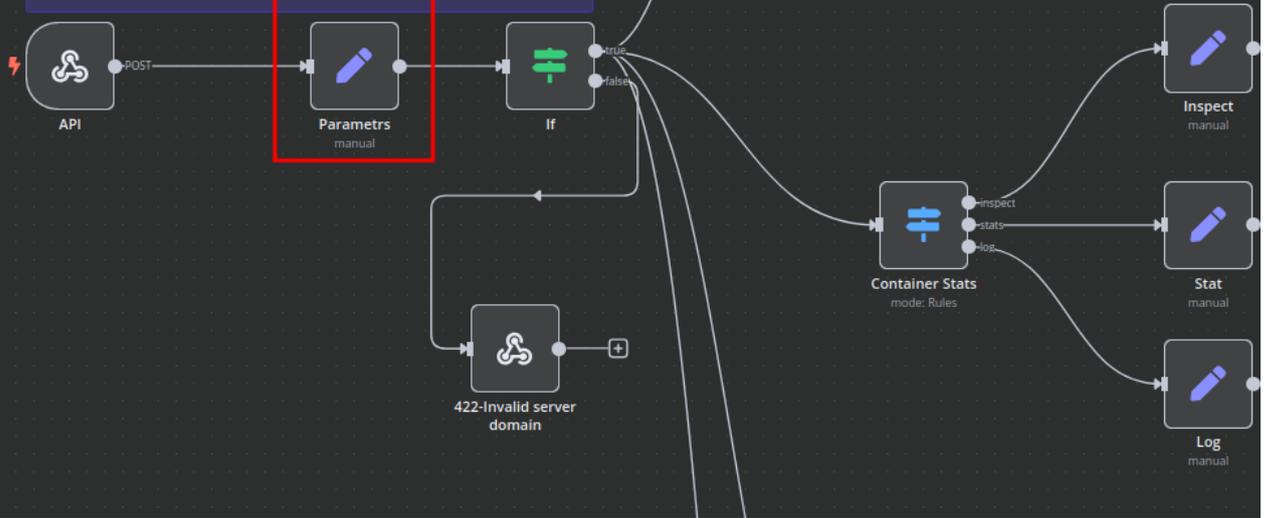
- `server_domain` – must match the domain of the WHMCS/WISECP Docker server.
- `clients_dir` – directory where user data related to Docker and disks will be stored.
- `mount_dir` – default mount point for the container disk (recommended not to change).

Do not modify the following technical parameters:

- `screen_left`
- `screen_right`

Additional Resources

- Full documentation: <https://doc.puq.info/books/docker-n8n-whmcs-module>
- WHMCS module: <https://puqcloud.com/whmcs-module-docker-n8n.php>
- WISECP module: <https://puqcloud.com/wisecp-module-docker-n8n.php>



 **Parameters** 🚧 Test step

Parameters Settings Docs [↗](#)

Mode
Manual Mapping ▼

Fields to Set

server_domain
A String ▼
d01-test.uuq.pl
[empty]

clients_dir
A String ▼
/opt/docker/clients
[empty]

mount_dir
A String ▼
/mnt
[empty]

screen_left
A String ▼
{{
[empty]

screen_right
A String ▼
}}
[empty]

- `server_domain` – Must match the domain of the WHMCS/WISECP Docker server.
- `clients_dir` – Directory where user data related to Docker and disks will be stored.
- `mount_dir` – Default mount point for the container disk (recommended not to change).

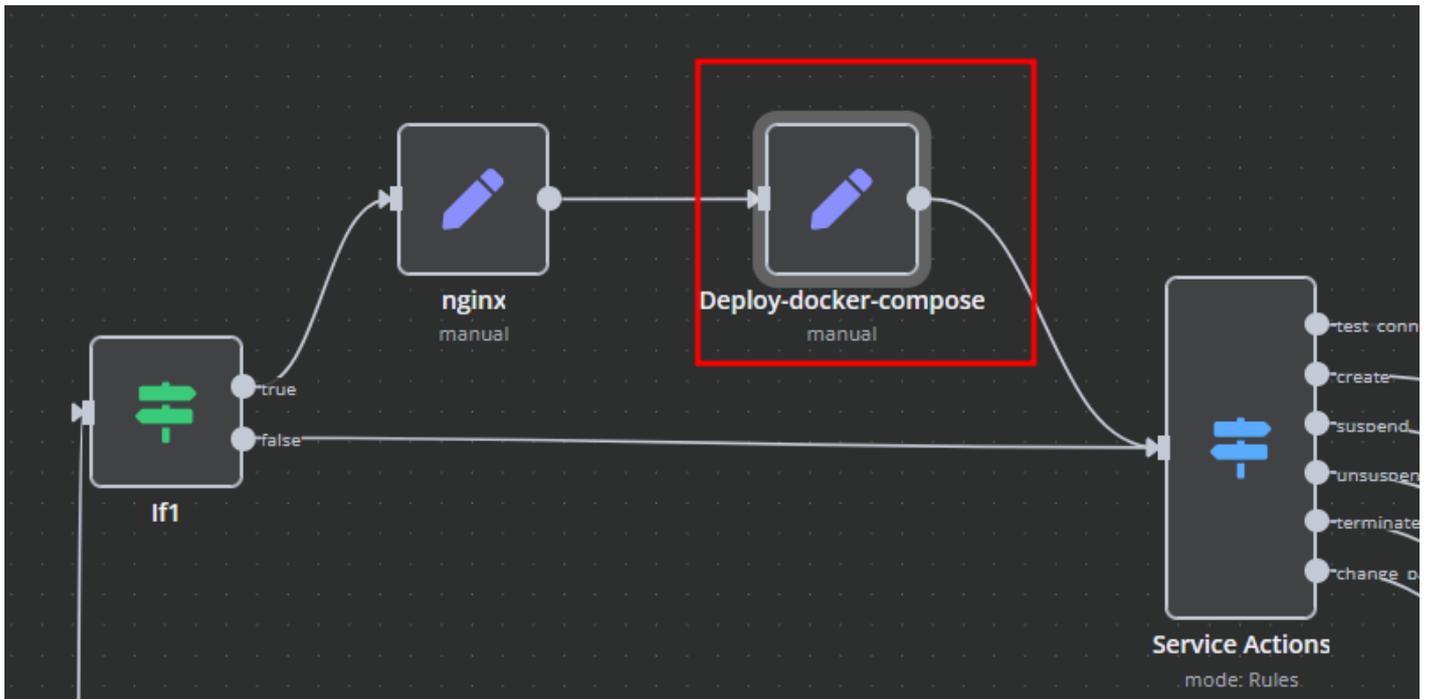
Do not modify the following technical parameters:

- `screen_left`
- `screen_right`

Deploy-docker-compose

In the **Deploy-docker-compose** element, you have the ability to modify the Docker Compose configuration, which will be generated in the following scenarios:

- When the service is created
- When the service is unlocked
- When the service is updated



Expression

Anything inside `{{ }}` is JavaScript. [Learn more](#)

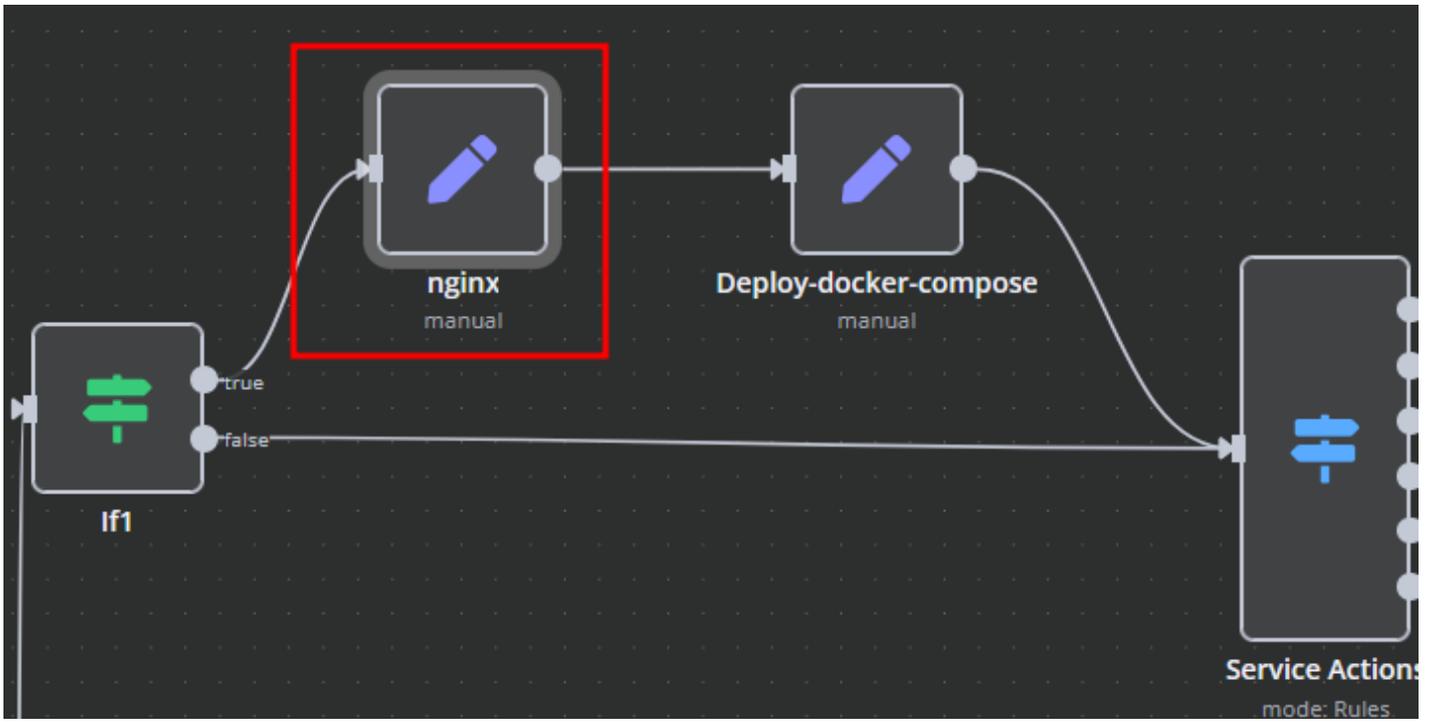
```
version: "3"
services:
  n8n-{{ $('API').item.json.body.domain }}:
    image: n8nio/n8n
    restart: unless-stopped
    container_name: {{ $('API').item.json.body.domain }}
    environment:
      - VIRTUAL_HOST={{ $('API').item.json.body.domain }}
      - LETSENCRYPT_HOST={{ $('API').item.json.body.domain }}
      - WEBHOOK_URL=https://{{ $('API').item.json.body.domain }}
    volumes:
      - {{ $('Params').item.json.mount_dir }}/{{ $('API').item.json.body.domain }}:/home/
node/.n8n
    networks:
      - nginx-proxy_web
    mem_limit: {{ $('API').item.json.body.ram }}G
    cpus: "{{ $('API').item.json.body.cpu }}"

networks:
  nginx-proxy_web:
    external: true
```

nginx

In the **nginx** element, you can modify the configuration parameters of the web interface proxy server.

- The **main** section allows you to add custom parameters to the **server** block in the proxy server configuration file.
- The **main_location** section contains settings that will be added to the **location** / block of the proxy server configuration. Here, you can define custom headers and other parameters specific to the root location.



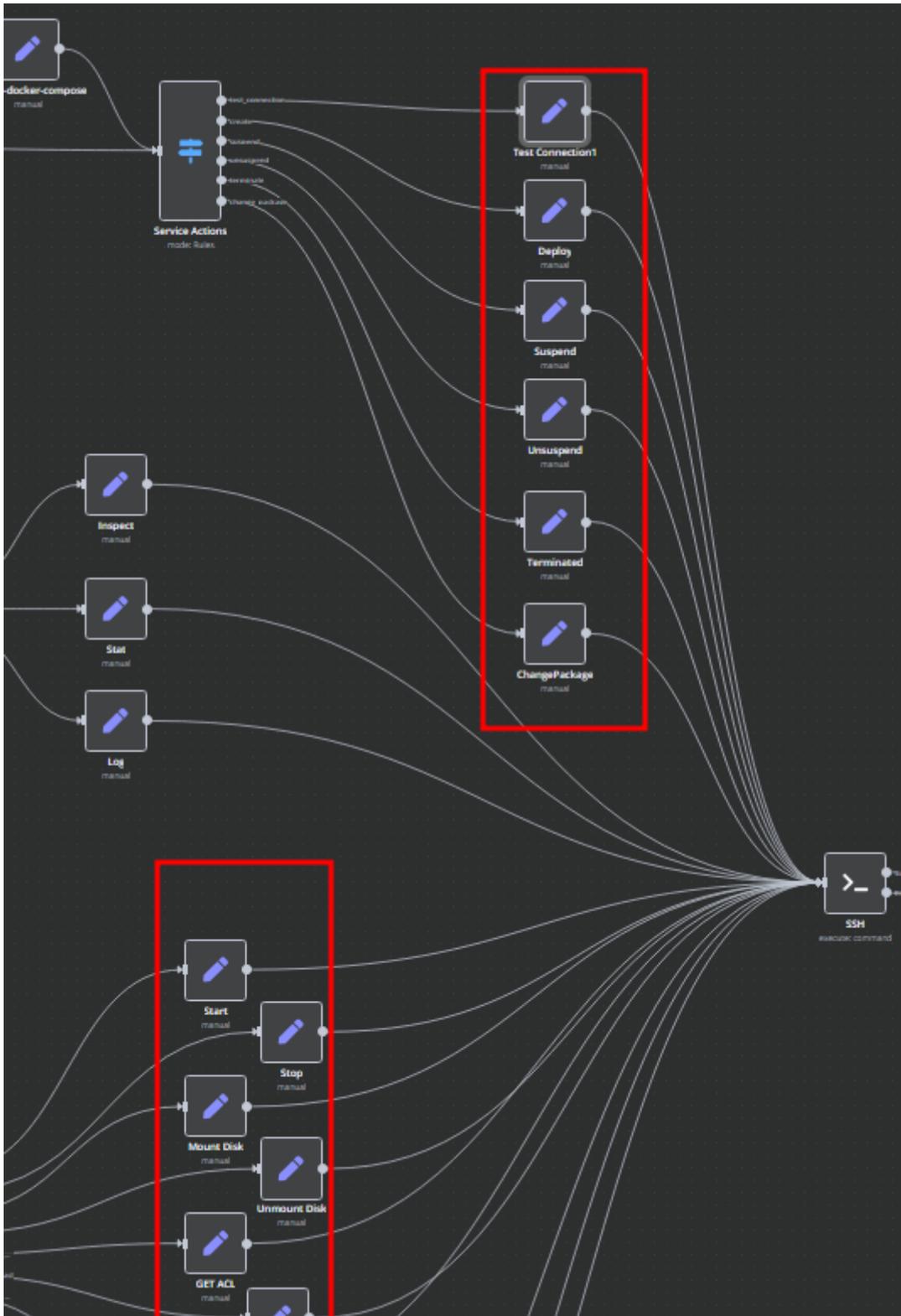
The screenshot shows the nginx configuration editor interface. At the top left is the 'nginx' logo. At the top right is a 'Test step' button. Below the logo are two tabs: 'Parameters' (selected) and 'Settings'. A 'Docs' link is also visible. The main area is titled 'Mode' and shows 'Manual Mapping'. Below this is the 'Fields to Set' section, which contains two configuration blocks. The first block is for the 'main' context, showing a list of settings: 'ignore_invalid_headers off;', 'client_max_body_size 0;', 'proxy_buffering off;', and 'proxy_request_buffering off;'. The second block is for the 'main_location' context, showing a single setting: '# Custom header'. Below these blocks is a dashed box with the text 'Drag input fields here or Add Field'. At the bottom left, there is a toggle for 'Include Other Input Fields' which is currently off. At the bottom right, there is an 'Options' section with a dropdown menu showing 'No properties' and an 'Add option' button.

Bash Scripts

Management of Docker containers and all related procedures on the server is carried out by

executing Bash scripts generated in **n8n**. These scripts return either a JSON response or a string.

- All scripts are located in elements directly connected to the **SSH** element.
- You have full control over any script and can modify or execute it as needed.



Add server

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Add a new server to the system WHMCS.

System Settings->Servers->Add New Server

- Enter the correct **Name** and **Hostname**

Name	<input type="text" value="d01-test.uuq.pl"/>
Hostname	<input type="text" value="d01-test.uuq.pl"/>
IP Address	<input type="text"/>
Assigned IP Addresses (One per line)	<input type="text"/>
Monthly Cost	<input type="text" value="0.00"/>
Datacenter/NOC	<input type="text"/>
Maximum No. of Accounts	<input type="text" value="200"/>
Server Status Address	<input type="text"/> 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	<input type="checkbox"/> Check to disable this server

Attention: Important Information

The **hostname** field represents the actual domain of the server running Docker and must match the **server_domain** parameter in the **n8n workflow**. If they do not match, communication will not function correctly. Additionally, this domain must be configured so that all its subdomains resolve to the IP address of the server running Docker.

The screenshot shows a configuration interface for parameters. At the top, there is a 'Test step' button. Below it, there are tabs for 'Parameters', 'Settings', and 'Docs'. The 'Parameters' tab is active. Under the 'Mode' section, a dropdown menu is set to 'Manual Mapping'. The 'Fields to Set' section contains two fields. The first field is 'server_domain', which is a string type and has the value 'd01-test.uuq.pl' entered. The second field is 'clients_dir', which is also a string type and has the value '/opt/docker/clients' entered.

In the **Server Details** section, select the **"PUQ Docker n8n"** module and enter the correct **username** and **password** for the **API endpoint** in the n8n workflow.

Additionally, in the **Access Hash** field, insert the **URL of the API entry point** for the n8n workflow.

Server Details

Module	PUQ Docker n8n 	<input type="button" value="Test Connection"/>
	✓ Connection successful. Some values have been auto-filled.	
Username	<input type="text" value="test"/>	
Password	<input type="password" value="...."/>	
Access Hash	<input type="text" value="https://n8n.puqcloud.com/webhook/docker-n8n"/>	
Secure	<input type="checkbox"/> Check to use SSL Mode for Connections	

Webhook URLs

Test URL

Production URL

POST https://n8n.puqcloud.com/webhook/docker-n8n

HTTP Methods

POST

Path

docker-n8n

Authentication

Basic Auth

Credential for Basic Auth

Incom API User

Respond

Using 'Respond to Webhook' Node

Insert a 'Respond to Webhook' node to control when and how you respond. [More details](#)

Options

No properties

Add option

Product Configuration

Docker n8n module **WHMCS**

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Add new product to WHMCS

System Settings->Products/Services->Create a New Product

In the **Module settings** section, select the **"PUQ Docker n8n"** module

Products/Services

Edit Product

Details Pricing **Module Settings** Custom Fields Configurable Options Upgrades Free Domain Cross-sells Other Links

Module Name: PUQ Docker MiniO
Server Group: None

License key: [Redacted] success: 2025-04-09T17:58:30+02:00

Disk space
1
GB Ex: 1

CPU
1
Ex: 0.1

RAM
1
GB Ex: 0.1

Link to instruction
https://puq.info/
A link to the instruction will be reflected in the client area.

Main domain
[Empty field]
The main domain to which the container subdomain will be added
If not filled in, the server domain will be used

Subdomain
{unixtime}
The app subdomain
{user_id}, {service_id}, {random_digit_x}, {random_letter_x}
Unix time: (unixtime) Year: (year), Month: (month), Day: (day), Hour: (hour), Minute: (minute), Second: (second)

Notification, used disk space X %
60

Notification disk limit email template
puqDockerMiniO Notification disk limit

Switch to Advanced Mode

Metric Billing: Traffic IN (GB) Configure Pricing | Traffic OUT (GB) Configure Pricing

- **License key** - A pre-purchased license key for the **"PUQ Docker n8n"** module. For the module to work correctly, the key must be active
- **Disk space** - defines the allocated disk size for the Docker container.
- **CPU** - sets the CPU usage limit for the Docker container.
- **RAM** - specifies the amount of RAM allocated to the Docker container.
- **Link to instruction** - URL to a guide that will be displayed in the client panel if provided.
- **Main domain** - defines the primary domain for the web interface of the application. If not set, the main domain will be taken from the **hostname** parameter in the server settings.

- **Subdomain** – a personal subdomain assigned to each service. If left empty or if the subdomain is already taken, it will be automatically generated in the format **{user_id}-{service_id}**.

-

Supported Macros for **App** **Subdomain:**

- **{user_id}** – Client ID
- **{service_id}** – Service ID
- **{random_digit_x}** – Random number (x defines the length)
- **{random_letter_x}** – Random letter (x defines the length)
- **{unixtime}** – Unix timestamp
- **{year}, {month}, {day}, {hour}, {minute}, {second}** – Date and time values
- **Notification, used disk space X %** – The percentage value that sets the threshold for the container's disk space usage will trigger a notification message to the client once the threshold is reached.
- **Notification disk limit email template** – The email template for the notification that will be sent when the threshold is reached.

Metric Billing

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To bill certain metrics separately, you can use the standard WHMCS Metric Billing mechanism.

To configure it, you need to enable the required metrics and set the desired prices. Metrics work based on the standard WHMCS mechanism, the description of which can be found here:

<https://docs.whmcs.com/products/configuration-options/usage-billing/>

Products/Services

Edit Product

Details Pricing **Module Settings** Custom Fields Configurable Options Upgrades Free Domain Cross-sells Other Links

The screenshot shows the WHMCS product configuration interface. It features a top navigation bar with tabs for 'Details', 'Pricing', 'Module Settings', 'Custom Fields', 'Configurable Options', 'Upgrades', 'Free Domain', 'Cross-sells', 'Other', and 'Links'. The 'Module Settings' tab is active. Below the navigation bar, there are several sections for configuring product details, including fields for name, description, and various options. A 'Switch to Advanced Mode' link is visible in the bottom right corner of the configuration area.

Metric Billing	Traffic IN (GB) Configure Pricing	<input checked="" type="checkbox"/>	Traffic OUT (GB) Configure Pricing	<input checked="" type="checkbox"/>
----------------	--------------------------------------	-------------------------------------	---------------------------------------	-------------------------------------

Configure Pricing



Traffic IN (GB)

Metric Type: Monthly

Metric Unit: GigaBytes

Pricing

Quantity Included

Scheme:

0.00

Per Unit Total Volume Graduated

Price Per GB

PLN

EUR

UAH

USD

1.00

1.00

1.00

1.00

Close

Save

Email Template (puqDockerN8N Welcome Email)

Docker n8n module **WHMCS**

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Create an email template for customer notifications.

System Settings->Email Templates->Create New Email Template

- **Email Type:** Product/service
- **Unique Name:** puqDockerN8N Welcome Email

Create New Email Template ×

Email Type

Product/Service ▼

Unique Name

puqDockerN8N Welcome Email

Subject:

n8n Order Information

Body:

Dear `{{client_name}}`,

Your order has been accepted for implementation.

Product/Service: `{{service_product_name}}`

Payment Method: `{{service_payment_method}}`

Amount: `{{service_recurring_amount}}`

Billing Cycle: `{{service_billing_cycle}}`

Next Due Date: `{{service_next_due_date}}`

The installation and setup of your n8n instance is in progress.

Within the next 4 minutes, you will be able to use your n8n instance.

Upon your first login, you will need to create an account.

Here is the link to your n8n server.

`https://{{service_domain}}/`

Thank you for choosing us.

`{{signature}}`

Subject: n8n Order Information

File ▾ Edit ▾ View ▾ Insert ▾ Format ▾ Table ▾ Help ▾

Paragraph ▾ Verdana ▾ 11pt ▾ **B** *I* ~~S~~ U A ▾ **A** ▾     ▾

Dear **{Scient_name}**,

Your order has been accepted for implementation.

Product/Service: **{Sservice_product_name}**
Payment Method: **{Sservice_payment_method}**
Amount: **{Sservice_recurring_amount}**
Billing Cycle: **{Sservice_billing_cycle}**
Next Due Date: **{Sservice_next_due_date}**

The installation and setup of your **n8n** instance is in progress.
Within the next 4 minutes, you will be able to use your **n8n** instance.

Upon your first login, you will need to create an account.

Here is the link to your n8n server.

[**https://{Sservice_domain}**](https://{Sservice_domain})

Thank you for choosing us.

{Signature}

P 82 WORDS POWERED BY TINYMCE

Email Template (puqDockerN8N Update Email)

Docker n8n module **WHMCS**

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Create an email template for customer notifications.

System Settings->Email Templates->Create New Email Template

- **Email Type:** Product/service
- **Unique Name:** puqDockerN8N Update Email

Create New Email Template ×

Email Type

Product/Service ▾

Unique Name

puqDockerN8N Update Email

Cancel

Create

Subject:

n8n Update Information

Body:

Dear {\$client_name},

Your instance is currently being updated.

You will be able to use your n8n server again within 3 minutes.

Here is the link to your n8n server.

[https://{\\$service_domain}/](https://{$service_domain}/)

Thank you for choosing us.

{\$signature}

Subject: n8n Update Information

File ▾ Edit ▾ View ▾ Insert ▾ Format ▾ Table ▾ Help ▾

Paragraph ▾ Verdana ▾ 11pt ▾ **B** *I* ~~S~~ U A ▾ **A** ▾    

Dear **{\$client_name}**,

Your instance is currently being updated.
You will be able to use your **n8n** server again within 3 minutes.

Here is the link to your n8n server.

[**https://{\\$service_domain}/**](https://{$service_domain}/)

Thank you for choosing us.

{\$signature}

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Email Template

(puqDockerN8N Notification disk limit)

Docker n8n module **WHMCS**

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Create an email template for customer notifications.

System Settings->Email Templates->Create New Email Template

- **Email Type:** Product/service
- **Unique Name:** puqDockerN8N Notification disk limit

Create New Email Template ×

Email Type

Unique Name

Subject:

Disk space usage {\$disk_used_percentage}%

Body:

Dear {\$client_name},

We want to inform you that your n8n service is running low on disk space.
Please take action to prevent service interruptions.

Service Details:

Product/Service: {\$service_product_name}

Domain: {\$service_domain}

Total Disk Space: {\$disk_total}

Used Disk Space: {\$disk_used} ({\$disk_used_percentage}%)

Consider freeing up space or upgrading your plan if needed.

{\$signature}

Subject:

File ▾ Edit ▾ View ▾ Insert ▾ Format ▾ Table ▾ Help ▾

Paragraph ▾ Verdana ▾ 11pt ▾ **B** *I* U A ▾ **A** ▾    

Dear **{\$client_name}**,

We want to inform you that your **n8n** service is running low on disk space.
Please take action to prevent service interruptions.

Service Details:

- **Product/Service:** {\$service_product_name}
- **Domain:** {\$service_domain}
- **Total Disk Space:** {\$disk_total}
- **Used Disk Space:** {\$disk_used} ({\$disk_used_percentage}%)

Consider freeing up space or upgrading your plan if needed.

{\$signature}

P 58 WORDS POWERED BY TINYMCE 