Project N.O.M.A.D. on Unraid

Document Information

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Disclaimer

This manual documents the steps **I personally used** to deploy Project N.O.M.A.D. on Unraid. I am still learning Docker and Unraid, and this guide is provided **as-is**, with no guarantees.

- I am **not responsible** for any issues, data loss, or misconfigurations that may occur.
- I **cannot provide active support** beyond sharing what worked for me.
- This guide is **not affiliated with or endorsed by** the Project N.O.M.A.D. team.
- It was created independently, with the help of **AI**, to assist others who may be learning as well.

Note About Disk-Collector & Port Change

The `disk-collector` service has been **intentionally removed** from the provided `docker-compose.yml`.

Unraid does not support the mount propagation mode (`rslave`) required by this service, which results in the error:

```
path / is mounted on / but it is not a shared or slave mount
```

Removing this service avoids the error and does **not** affect core NOMAD functionality.

Only the optional disk usage widget inside the UI is unavailable.

Why the Port Was Changed

The default NOMAD admin interface uses **port 8080** internally.

On my system, **port 8080 was already in use**, so I changed the **external** port to **8081** to avoid conflicts.

Users may change the **external** port if needed, but **must not** change the internal container port (`8080`), or NOMAD will not function correctly.

Example mapping:

```
8081:8080
↑    ↑
|    └─ internal container port (DO NOT CHANGE)
└──── external port (safe to change)
```

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1. Introduction

This manual provides a structured, step-by-step process for deploying Project N.O.M.A.D. on Unraid using Docker Compose.

It is designed for beginners and includes context for each step to support learning and troubleshooting.

2. System Requirements

- Unraid server (6.12 or later recommended)
- Docker Compose Manager plugin installed
- Internet access for container image downloads
- Basic familiarity with Unraid's terminal and file structure

3. Folder Structure Preparation

Purpose

Persistent data must be stored outside containers to survive updates and restarts. Unraid uses `/mnt/user/appdata/` for this purpose.

Procedure

```
mkdir -p /mnt/user/appdata/nomad/storage
mkdir -p /mnt/user/appdata/nomad/mysql
mkdir -p /mnt/user/appdata/nomad/redis
```

Result

```
/mnt/user/appdata/nomad/
├── storage/
```

```
├── mysql/
└── redis/
```

4. Preparing and Editing the Provided Compose File

Purpose

Instead of creating a new compose file, you will **edit the provided file on your computer first**, update all required fields, and rename it before uploading it to your Unraid server.

Procedure

1. Locate the provided compose file on your computer.
2. Open it in a text editor such as:
    a. Notepad++
    b. VS Code
    c. Sublime Text
    d. Any editor that supports YAML
3. Update all required fields, including every `renameme` placeholder (see next section).
4. Once all edits are complete, rename the file to: `docker-compose.yml`

Result

Your compose file is fully edited and correctly named.

5. Updating the `renameme` Fields and Uploading the File

Purpose

The provided compose file includes placeholder values labeled `renameme`.

These must be updated **before uploading the file to your server**, or the stack will not deploy correctly.

What You Need to Change

Look for fields such as:

```
MYSQL_PASSWORD: renameme
MYSQL_ROOT_PASSWORD: renameme
NOMAD_ADMIN_PASSWORD: renameme
```

Replace each `renameme` with your own secure values.

Important Notes

- Do **not** use spaces or special characters that may break YAML formatting.
- Keep passwords consistent across services if required.
- Do **not** modify internal container ports (e.g., `8080`).
- Only change the **external** port if needed (e.g., `8081:8080`).

Uploading the File

Once all edits are complete and the file is renamed:

Upload it to your Unraid server at:

`/mnt/user/appdata/nomad/`

Result

Your compose file is now fully configured, uploaded, and ready for validation.

6. Validating the Compose File (Optional)

Purpose

YAML is sensitive to indentation and formatting. Validation helps detect errors early.

Procedure

```
cd /mnt/user/appdata/nomad
docker compose config
```

Result

- If valid: a full expanded configuration is displayed
- If invalid: an error message identifies the problematic line

7. Adding the Stack in Docker Compose Manager

Purpose

Unraid requires the Docker Compose Manager plugin to run Compose stacks.

Procedure

1. Open Docker → Docker Compose Manager
2. Select **Add New Stack**
3. Enter:
    a. Stack Name: `nomad`
    b. Compose File Path: `/mnt/user/appdata/nomad/docker-compose.yml`
4. Save the configuration

Result

A new stack named nomad appears in the manager.

8. Deploying the Stack

Purpose

This step downloads images, creates containers, and initializes services.

Procedure

1. Select the nomad stack
2. Click **Up**

Result

All containers begin deployment.

Disk-collector is intentionally absent.

9. Verifying Container Status

Purpose

Ensures all required services are running.

Expected Containers

- `nomad_admin`
- `nomad_mysql`
- `nomad_redis`
- `nomad_updater`
- `nomad_dozzle`

Procedure

Open the **Docker** tab in Unraid.

Result

All containers should display a green “running” indicator.

10. Accessing the NOMAD Interface

Procedure

Open a browser and navigate to:

`http://YOUR_UNRAID_IP:8081`

Result

The NOMAD login/setup interface loads successfully.

11. Quick Guide: Enabling Ollama GPU Acceleration

This section provides a simple, fast way to enable GPU-accelerated AI model support for NOMAD using Ollama.

Step 1 — Install the NVIDIA Driver Plugin

If your server has an NVIDIA GPU:

1. Go to **Apps** in Unraid
2. Search for **NVIDIA Driver**

3. Install the plugin
4. Reboot your server

This enables GPU passthrough to Docker containers.

Step 2 — Add the Ollama Service to Your Compose File

Open your `docker-compose.yml` and add the Ollama service block provided with your NOMAD bundle.

Make sure it includes:

- GPU access
- A persistent model directory
- The correct network

Step 3 — Pull Your First Model

Once the stack is running, open a terminal and run:

```
ollama pull llama2
```

Or any other model you prefer.

Step 4 — Restart the NOMAD Stack

After the model is downloaded:

1. Go to **Docker Compose Manager**
2. Select the nomad stack
3. Click **Down**
4. Then click **Up**

This ensures NOMAD detects the Ollama service.

Step 5 — Verify GPU Acceleration

Inside NOMAD:

- Go to the AI settings page
- Confirm that Ollama is detected
- Run a test prompt

If the model responds quickly and GPU usage increases, acceleration is working.

12. Backup & Restore Strategy

Purpose

Protects against data loss due to hardware failure or corruption.

What to Back Up

`/mnt/user/appdata/nomad/`

Includes:

- MySQL database
- Redis data
- NOMAD storage
- Updater files

Recommended Method

Install: **CA Backup/Restore Appdata**

Schedule automated backups.

Result

A reliable recovery point is always available.

13. Quick Setup Guide (Summary)

Step 1 — Create folders

```
mkdir -p /mnt/user/appdata/nomad/storage
mkdir -p /mnt/user/appdata/nomad/mysql
mkdir -p /mnt/user/appdata/nomad/redis
```

Step 2 — Edit the provided compose file

Update all `renameme` fields.

Step 3 — Rename the file

`docker-compose.yml`

Step 4 — Upload to your server

`/mnt/user/appdata/nomad/`

Step 5 — Add the stack

Unraid → Docker → Docker Compose Manager → Add New Stack

Step 6 — Deploy

Select the stack → **Up**

Step 7 — Access NOMAD

`http://YOUR_UNRAID_IP:8081`

14. Troubleshooting

This section covers the most common issues users may encounter when deploying Project N.O.M.A.D. on Unraid.

Issue 1 — Error: “path / is mounted on / but it is not a shared or slave mount”

Cause

Unraid does not support the mount propagation mode required by the disk-collector container.

Solution

Ensure the `disk-collector` service is removed from your compose file.

Issue 2 — NOMAD UI Not Loading on Port 8081

Possible Causes & Fixes

1. Wrong IP Address

To confirm the correct IP:

- Open the **Docker** tab
- Click the **nomad_admin** container
- Copy the **container IP** shown

Then try:

http://COPIED_IP:8081

2. Wrong URL

Use:

http://YOUR_UNRAID_IP:8081

3. Port Already in Use

Change the **external** port only:

`8082:8080`

4. Container Failed to Start

Check the Docker tab for errors.

Issue 3 — “docker-compose.yml not found”

Cause

Incorrect file name or path.

Solution

Ensure:

`/mnt/user/appdata/nomad/docker-compose.yml`

Issue 4 — YAML Errors

Run:

```
docker compose config
```

Fix indentation, spacing, or missing characters.

Issue 5 — MySQL or Redis Fails to Start

Fixes

- Remove corrupted data folders (if safe)
- Check for port conflicts

Issue 7 — Permission Denied on Appdata

Run:

`Tools → New Permissions`

Apply to `appdata` only.

Issue 9 — “Cannot connect to database”

Restart `nomad_admin` after MySQL is healthy.

End of Manual