N8N Self-Hosted AI Starter Kit Installation and Usage Guide

N8N AI Self hosted kit gives you a low AI code development environment on your local machine and access to locally hosted AI models at no cost. It can be used as a perfect local development environment to build N8N workflows across different platforms. In our course we will make use of REST APIs, SQL APIs to connect to various platforms like Snowflake, Atlassian JIRA, Microsoft Outlook, Gmail etc. to build out data operations workflows.

Prerequisites:

- Docker
- Gitbash

Installation Steps

1. Clone the Repository:

Open your terminal and run the commands below to clone the GitHub repository into your local system:

- git clone https://github.com/n8n-io/self-hosted-ai-starter-kit.git
- cd self-hosted-ai-starter-kit

2. Set Up Environment Variables:

- Copy the example environment file and edit secrets/passwords:
- cp. env.example. env
  # Edit .env to set your secrets and passwords but it might not be needed at this moment so just run as it is.

3. Choose Your Hardware Profile and Start Services

- For Nvidia GPU Users:
  docker compose --profile gpu-nvidia up
- For AMD GPU Users (Linux):
  docker compose --profile gpu-amd up
- For Mac / Apple Silicon Users:

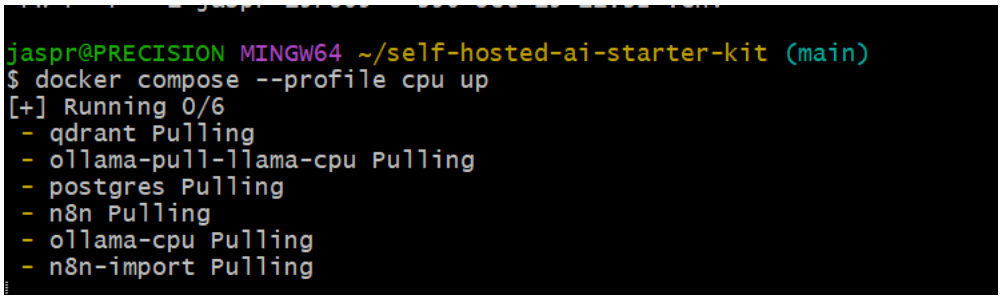
  Option 1: Run everything in Docker (CPU only)
  docker compose --profile cpu up

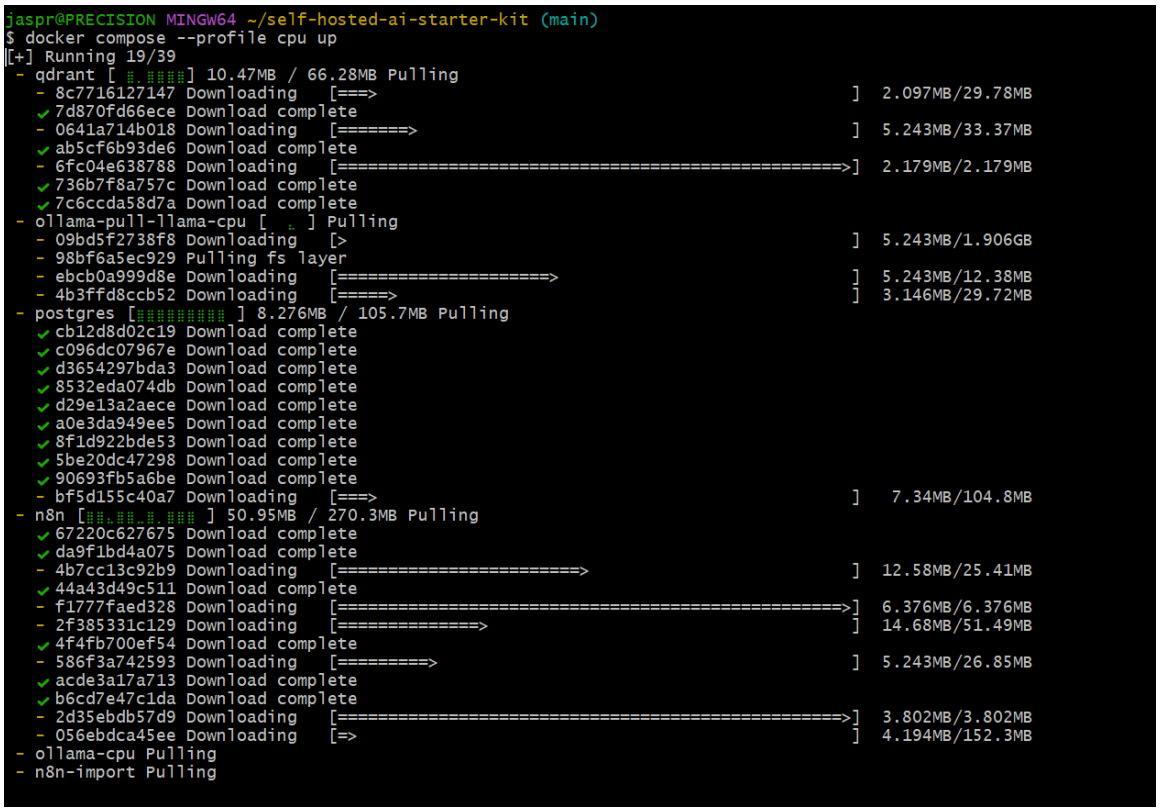
Option 2: Run Ollama natively on Mac and connect to it from Docker

1. Install Ollama from https://ollama.com/download
2. Run Ollama locally on your Mac
3. Start Docker services:
   docker compose up
4. Update Ollama credentials in n8n:
   - Go to http://localhost:5678/home/credentials
   - Click on "Local Ollama service"
   - Change base URL to http://host.docker.internal:11434/

- For CPU-Only Systems: THIS WILL APPLY TO WINDOWS 11

  docker compose --profile cpu up





4. Verify Services Are Running

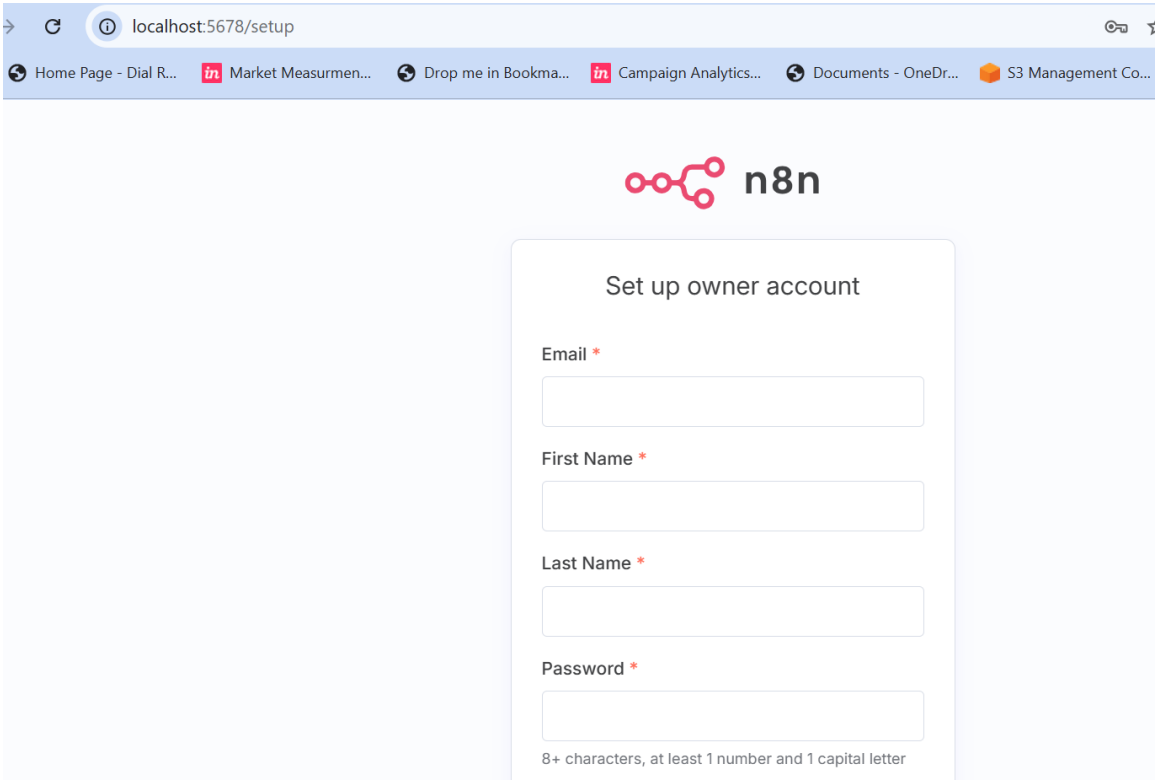
- Check running containers:
- docker-compose ps
- You should see n8n, Ollama, Qdrant, and PostgreSQL running.

```
jaspr@PRECISION MINGW64 ~/self-hosted-ai-starter-kit (main)
$ docker-compose ps
NAME                                IMAGE                  COMMAND                  SERVICE      CREATED          STATUS                    PORTS
n8n                                 n8nio/n8n:latest       "tini -- /docker-ent…"   n8n          19 minutes ago   Up 19 minutes             0.0.0.0:5678->5678/tcp, [:
:5678->5678/tcp
ollama                              ollama/ollama:latest   "/bin/ollama serve"      ollama-cpu   19 minutes ago   Up 19 minutes             0.0.0.0:11434->11434/tcp,
:]:11434->11434/tcp
qdrant                              qdrant/qdrant          "./entrypoint.sh"        qdrant       19 minutes ago   Up 19 minutes             0.0.0.0:6333->6333/tcp, [:
:6333->6333/tcp
self-hosted-ai-starter-kit-postgres-1   postgres:16-alpine     "docker-entrypoint.s…"   postgres     19 minutes ago   Up 19 minutes (healthy)   5432/tcp
```

Using the n8n Self-Hosted AI Starter Kit

1. Access the n8n Interface

- Open your browser and go to: http://localhost:5678/
- Create an account if prompted.
- You'll see the n8n dashboard and workflow editor.



2. Core Components

- Ollama (LLM Service): Powers AI capabilities. Models are downloaded on first use.
- Qdrant (Vector DB): For embeddings and similarity search. Web UI at http://localhost:6333/dashboard
- PostgreSQL: Persistent storage for n8n workflows.

3. Running Demo Workflows

- The kit includes a demo workflow to showcase AI features.
- You can create, edit, and run workflows using the drag-and-drop editor.
- Integrate AI nodes (Ollama), vector search (Qdrant), and database operations (PostgreSQL) as needed.

4. Pulling AI Models with Ollama

- To add models for text generation or embeddings:
- docker exec -it n8n-ollama ollama pull mistral
- docker exec -it n8n-ollama ollama pull nomic-embed-text
- Replace "mistral" with other model names as needed (e.g., "llama2", "phi").

Tips

- Harden and secure your setup before using in production.
- Regularly update containers and restrict access for security.
- Explore n8n documentation for advanced workflow examples.