Run n8n Locally with Docker

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🧩 Requirements

- **Docker Desktop**
  - Windows / macOS / Linux
- Basic command-line usage

🛠️ Step 1: Install Docker

Download and install Docker Desktop
👉 https://www.docker.com/products/docker-desktop/

After installation, confirm:

```
docker --version
```

🛠️ Step 2: Create a Folder for n8n

```
mkdir n8n-local
cd n8n-local
```

🛠️ Step 3: Create `docker-compose.yml`

Create a file named **docker-compose.yml**:

```
version: "3.8"

services:
  n8n:
    image: n8nio/n8n
    container_name: n8n
    ports:
      - "5678:5678"
    environment:
      - N8N_BASIC_AUTH_ACTIVE=true
      - N8N_BASIC_AUTH_USER=admin
      - N8N_BASIC_AUTH_PASSWORD=admin123
      - N8N_HOST=localhost
      - N8N_PORT=5678
      - N8N_PROTOCOL=http
      - WEBHOOK_URL=http://localhost:5678/
      - GENERIC_TIMEZONE=Asia/Kuala_Lumpur
    volumes:
      - n8n_data:/home/node/.n8n
    restart: always

volumes:
  n8n_data:
```

🛠️ Step 4: Start n8n

```
docker compose up -d
```

Check status:

```
docker ps
```

🌐 Step 5: Open n8n

Open browser:

```
http://localhost:5678
```

Login:

- **Username:** admin
- **Password:** admin123

🎉 **n8n is now running locally**

Run n8n Locally with Node

Run n8n Locally with Node.js (No Docker)

⚠️ More issues possible (Node version, dependencies)

🧩 Requirements

- Node.js **v18 or v20**
- npm

Check:

```
node -v
npm -v
```

🛠️ Step 1: Install n8n

```
npm install -g n8n
```

🛠️ Step 2: Start n8n

```
n8n
```

🌐 Step 3: Open n8n

```
http://localhost:5678
```

Ubuntu VM + Docker Setup

Ubuntu VM + Docker Setup

🧱 Architecture (What You're Building)

```
Your PC
 └── Virtual Machine (Ubuntu)
      └── Docker
           └── n8n (localhost:5678)
```

✅ Step 1: Prepare Ubuntu VM

✔ Recommended Ubuntu Version

- **Ubuntu 22.04 LTS** (recommended)
- Minimum:
  - 2 GB RAM (4 GB better)
  - 2 CPU
  - 30 GB disk

✔ Update system

```
sudo apt update && sudo apt upgrade -y
```

🐳 Step 2: Install Docker on Ubuntu

1️⃣ Install dependencies

```
sudo apt install -y ca-certificates curl gnupg lsb-release
```

2️⃣ Add Docker GPG key

```
sudo mkdir -p /etc/apt/keyrings
curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg
--dearmor -o /etc/apt/keyrings/docker.gpg
```

3️⃣ Add Docker repository

```
echo \
"deb [arch=$(dpkg --print-architecture)
signed-by=/etc/apt/keyrings/docker.gpg] \
https://download.docker.com/linux/ubuntu \
$(lsb_release -cs) stable" | sudo tee /etc/apt/sources.list.d/docker.list >
/dev/null
```

4️⃣ Install Docker Engine

```
sudo apt update
sudo apt install -y docker-ce docker-ce-cli containerd.io
docker-compose-plugin
```

5️⃣ Enable Docker without sudo (IMPORTANT)

```
sudo usermod -aG docker $USER
newgrp docker
```

Verify:

```
docker run hello-world
```

📦 Step 3: Create n8n Project Folder

```
mkdir ~/n8n
```

```
cd ~/n8n
```

🧩 Step 4: Create `docker-compose.yml`

```
nano docker-compose.yml
```

Paste this **production-safe local setup** 👇

```
version: "3.8"

services:
  n8n:
    image: n8nio/n8n:latest
    container_name: n8n
    ports:
      - "5678:5678"
    environment:
      - N8N_BASIC_AUTH_ACTIVE=true
      - N8N_BASIC_AUTH_USER=admin
      - N8N_BASIC_AUTH_PASSWORD=strongpassword
      - N8N_HOST=localhost
      - N8N_PORT=5678
      - N8N_PROTOCOL=http
      - WEBHOOK_URL=http://localhost:5678/
      - GENERIC_TIMEZONE=Asia/Kuala_Lumpur
    volumes:
      - n8n_data:/home/node/.n8n
    restart: unless-stopped

volumes:
  n8n_data:
```

Save:

CTRL + O → Enter
CTRL + X

▶️ Step 5: Start n8n

```
docker compose up -d
```

Check:

```
docker ps
```

🌐 Step 6: Access n8n (IMPORTANT for VM)

Option A: Access from inside VM

Open browser in Ubuntu:

```
http://localhost:5678
```

Option B: Access from Host Machine (Recommended)

✔ VM Network Setting

Set your VM to:

- **NAT** (default) → use **port forwarding**
- OR **Bridged Adapter** (easier)

✔ If Bridged:

Find VM IP:

```
ip a
```

Example:

```
inet http://192.168.1.120
```

Open from host:

http://192.168.1.120:5678

🔐 Step 7: Login

Use credentials you set:

- Username: `admin`
- Password: `strongpassword`

🎉 **n8n is running on Docker inside Ubuntu VM**

🧠 Pro Tips (Very Important)

🔹 Check logs

```
docker logs -f n8n
```

🔹 Stop / Start

```
docker compose stop
docker compose start
```

🔹 Restart safely

```
docker compose down
docker compose up -d
```

(Data is safe due to volume)