

n8n LangChain Integration - Quick Reference Guide

The Root Cause of Your Crashes

CRITICAL: Your n8n is crashing because you're using the wrong Docker image. LangChain nodes ONLY work with the `ai-beta` image.

Immediate Fix

Step 1: Update Your Docker Compose

Change your docker-compose.yml from:

YAML

```
image: n8nio/n8n:latest
```

To:

YAML

```
image: n8nio/n8n:ai-beta
```

Step 2: Restart Your Container

Bash

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

Complete Working Docker Compose Example

YAML

```

version: '3.8'

services:
  postgres:
    image: postgres:14
    restart: always
    environment:
      POSTGRES_DB: n8n
      POSTGRES_USER: n8n_user
      POSTGRES_PASSWORD: your_secure_password
    volumes:
      - postgres_data:/var/lib/postgresql/data

  n8n:
    image: n8nio/n8n:ai-beta # This is the key change!
    restart: always
    ports:
      - "5678:5678"
    environment:
      - DB_TYPE=postgresdb
      - DB_POSTGRESDB_HOST=postgres
      - DB_POSTGRESDB_DATABASE=n8n
      - DB_POSTGRESDB_USER=n8n_user
      - DB_POSTGRESDB_PASSWORD=your_secure_password
      - N8N_ENCRYPTION_KEY=your_encryption_key_here
      - N8N_USER_MANAGEMENT_JWT_SECRET=your_jwt_secret_here
      - OPENAI_API_KEY=your_openai_key_here
    volumes:
      - n8n_data:/home/node/.n8n
      - ./local-files:/files
    depends_on:
      - postgres

volumes:
  n8n_data:
  postgres_data:

```

Installing LangChain Nodes

Method 1: Manual Installation (After using ai-beta image)

Bash

```
# Access your container
docker exec -it your_n8n_container_name sh

# Install LangChain nodes
npm install @n8n/n8n-nodes-langchain

# Restart n8n
exit
docker-compose restart n8n
```

Method 2: Custom Dockerfile

Plain Text

```
FROM n8nio/n8n:ai-beta
USER root
RUN npm install @n8n/n8n-nodes-langchain
USER node
```

Common Issues and Quick Fixes

Issue: "Last session crashed"

Solution: Enable diagnostics to see real errors:

YAML

```
environment:
  - N8N_DIAGNOSTICS_ENABLED=false # Counterintuitively, this shows errors
```

Issue: "Unrecognized node type"

Solution: You're still using the wrong image. Must use `ai-beta`.

Issue: Database connection errors

Solution: Use PostgreSQL instead of MySQL:

YAML

```
environment:
  - DB_TYPE=postgresdb # Not mysqldb
```

Environment Variables You Need

Plain Text

```
# Required for LangChain
N8N_ENCRYPTION_KEY=your_32_character_encryption_key
N8N_USER_MANAGEMENT_JWT_SECRET=your_jwt_secret
OPENAI_API_KEY=your_openai_api_key

# Database (PostgreSQL recommended)
DB_TYPE=postgresdb
DB_POSTGRESDB_HOST=postgres
DB_POSTGRESDB_DATABASE=n8n
DB_POSTGRESDB_USER=n8n_user
DB_POSTGRESDB_PASSWORD=your_password

# Optional but recommended
NODE_ENV=production
N8N_DIAGNOSTICS_ENABLED=false
N8N_PERSONALIZATION_ENABLED=false
```

Verification Steps

1. **Check your image:** `docker ps` should show `n8nio/n8n:ai-beta`
2. **Check LangChain installation:** Look for LangChain nodes in the n8n interface
3. **Test a simple workflow:** Create a workflow with a LangChain node

Next Steps

Once you have this working:

1. Read the complete deployment guide for production setup
2. Configure SSL/HTTPS for production use

3. Set up proper backup procedures
4. Monitor resource usage (AI operations use more resources)

Support Resources

- Complete Guide: See the full deployment guide document
- n8n Community: <https://community.n8n.io/>
- LangChain Docs: <https://docs.n8n.io/advanced-ai/langchain/overview/>