

What is N8N?

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19 July 2025

1 Introduction

What is n8n? N8N is a powerful *workflow automation tool* that acts like a digital bridge, automating those rigorous and difficult tasks without complex code. Consider it a visual "if this, then that" builder for all your apps!

Some of the key strength of n8n are:

- **Low-Code:** Primarily uses a visual interface (drag and drop) instead of extensive coding.
- **Source-Available:** You can see and even modify the underlying code! This allows for you to test on your own server for full data control.

2 What can I use it for?

What can I use n8n for? There are limitless possibilities, but some examples are as follows:

- **Data Synchronization:** Automatically move data between systems (e.g., new website lead to CRM and welcome email).
- **Automated Notifications:** Get alerts in Slack, Discord, or email for specific events (e.g, new payment).
- **Report Generation:** Collect data from various sources, compile, and generate scheduled reports.
- **Social Media Management:** Automate posting new blog content to multiple platforms.

3 AI-Powered Workflows and Agents

N8N also excels at integrating AI-powered workflows and agents. N8N can integrate with LLMs such as Google's Gemini or OpenAI's ChatGPT. You can build AI agents that can perform complex tasks such as:

- Summarizing web pages and emailing them.
- Generating marketing copy from product descriptions.
- Answering customer queries by using your knowledge base.
- Analyzing data and providing insights.

Essentially, if you do the same tasks repetitively, especially if it involves moving information between apps, n8n will automate it!

4 What are the Core Building Blocks?

The n8n workflows are built like a chain, with each link performing a specific task. These links are referred to as **Nodes** which are the fundamental building blocks of any n8n workflow.

- **Trigger Nodes:** Every workflow must start with a trigger. This is beginning of your automation.
 - Webhook: Listens for an event from another app (e.g., form submission).
 - Schedule: Runs your workflow at a set interval (e.g., daily at 9 AM).
 - App-Specific Triggers: "New Email" for Gmail, "New Row" for Google Sheets.
- **Action Nodes:** Perform an action within an application once triggered.
 - "Send Email" (Gmail Node)
 - "Create Row" (Google Sheets Node)
 - "Post Message" (Slack Node)
 - "Make HTTP request" (to interact with almost any API)
- **Core Nodes:** Generic nodes for manipulating and controlling data flow.
 - **Set:** Add, modify, or remove data fields.
 - **Filter:** Branch overflow based on conditions.
 - **Split in Batches:** Process large data in smaller chunks.
 - **Code:** Write custom JavaScript for unique tasks.
 - **AI Agent:** Special node to orchestrate AI model interactions and define tools.
- **Connections:** Nodes are connected in sequence to form a "workflow." The output of one node becomes the input for the next, allowing data to flow and be transformed.

- **Credentials:** You set up the "credentials" (API Keys, OAuth Tokens) once to securely connect to third-party apps.
- **Workflows:** The complete automation, from trigger to final action, built visually on a canvas.

5 Conclusion

The most significant aspects of n8n is combining these simple building blocks into more sophisticated, intelligent automation. Consider:

- An AI Agent monitors industry news, summarizing daily, and sending you a personalized digest.
- A system that processes invoices, extracts data, updates accounting software, and notifies your team of missing information.
- A personal assistant answering questions about your documents utilizing AI, triggered by a simple chat.