

n8n in Action

From Zero to Production-Ready Workflows in 3 days

FA-0484 · 3 days

Automation, RPA & Power Platform

Introduction

In modern businesses, managing data flow, integrating services, and automating routine processes is no longer optional, it's vital. n8n stands out because it gives teams **full control**: open-source, self-hostable, but still simple enough to use without heavy coding. You'll learn how to design workflows visually, integrate multiple apps or APIs, and even leverage AI-driven automation, all with flexibility and precision. By the end, you'll be equipped to turn manual tasks into reliable, scalable automation pipelines.

Learning outcomes

After this course, participants will be able to:

- Understand the architecture and core concepts of n8n (nodes, workflows, triggers, data flow).
 - Design and build simple-to-complex workflows connecting multiple services (APIs, databases, apps).
 - Use conditional logic, looping, and error handling to build robust automation flows.
 - Deploy n8n in a self-hosted or cloud environment, with proper configuration and credential management.
 - Leverage n8n's AI-capable nodes and integrations (LLMs, data enrichment, intelligent decision-making) for advanced workflows.
 - Test, debug, and monitor workflows; implement best practices for maintenance and scaling.
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Prerequisites

- Basic familiarity with APIs, webhooks, and data formats (JSON, CSV).

- Comfortable with at least one scripting language (e.g. JavaScript, Python) — helpful for advanced workflows or custom code nodes.
 - Basic understanding of networking / server hosting if deploying self-hosted (or willingness to follow instructions).
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Training outline

1. Introduction to n8n

1. What is n8n — history, philosophy, when/why to use it.
2. Core components: nodes, workflows, triggers, credentials, data flow model.
3. n8n deployment models: cloud vs. self-hosted; trade-offs & when to pick which.

2. Basic Workflow Building

1. Setting up your n8n environment (install, configuration, initial security/credentials)
2. Creating your first workflow: trigger → action → output
3. Connecting common services/apps (e.g. API calls, Webhooks, email, databases)
4. Understanding data structures, passing data between nodes, mapping and transformation

3. Workflow Logic and Control Flow

1. Conditional logic, branching, loops — building dynamic workflows
2. Error handling, retries, and logging — ensuring reliability.
3. Credential management, environment variables, secure storage of secrets

4. Intermediate: Workflow Management & Scaling

1. Best practices: naming, documentation, versioning workflows, maintainability
2. Performance considerations, scheduling workflows, concurrency and resource management
3. Deploying to a production/self-hosted environment: backup, monitoring, logging, security

5. Advanced: AI & Intelligent Automations with n8n

1. Overview of n8n's AI capabilities — AI nodes, LLM integrations, embeddings, vector databases.
2. Building workflows that combine data processing + AI inference + decision logic
3. Human-in-the-loop workflows: triggers, approvals, fallbacks, safe automation design.

4. Use-cases: data enrichment, automated reporting, intelligent notifications, AI-driven data transformation

6. Testing, Debugging, Deployment & Maintenance

1. Testing workflows: sandboxing, dry runs, safe data handling
2. Logging, monitoring executions, handling failures gracefully
3. Version control, workflow documentation, collaborative workflow development
4. Tips for scaling automation across teams/divisions

7. Real-World Use Cases & Project Ideas

1. Automating CRM data ingestion and enrichment before database insertion.
2. End-to-end pipelines: API → transformation → storage → notification/email
3. AI-driven automation: e.g. auto-tagging data, generating reports, sending context-aware alerts
4. Integration across multiple services: databases, external APIs, internal tools — orchestrated via n8n

8. Wrap-up & Next Steps

1. Evaluating when to use n8n vs alternative tools (proprietary or no-code platforms)
2. Security, compliance, and data governance when automating business workflows
3. Community & ecosystem: available plugins, community workflows, documentation, continued learning