
Module 20: Automation with Zapier, Make and n8n

Connect Gmail, Slack, Google Sheets, forms and AI so routine work runs by itself, and learn to choose between Zapier, Make and n8n.



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Built from the 55-lecture course study guide and extended to the 12-module Product Core curriculum. Hypothetical examples are labelled; no real company results are invented.

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MODULE 20

Automation with Zapier, Make and n8n

Connect Gmail, Slack, Google Sheets, forms and AI so routine work runs by itself, and learn to choose between Zapier, Make and n8n.

≈ 10 h study

Use practice accounts

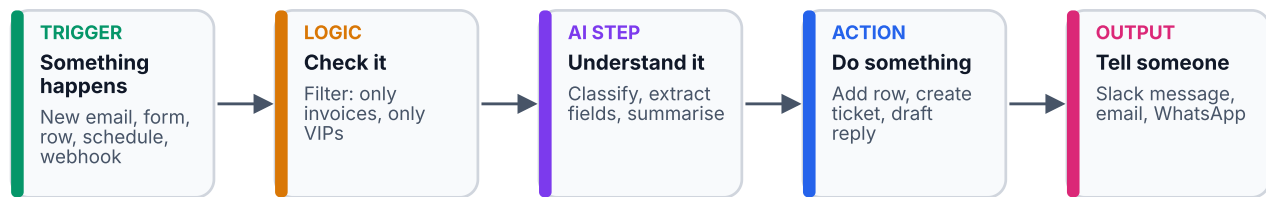
Automations act without asking. Build every lab with a **practice Gmail** and a **practice Slack workspace**, and never point a test at real customers. Screens are **illustrative wireframes**.

20.1 The building blocks

Every automation tool uses the same ideas with different names.

Idea	What it means	Zapier	Make	n8n
Automation	The whole flow	Zap	Scenario	Workflow
Trigger	What starts it	Trigger	Trigger module (first)	Trigger node
Action	A step that does something	Action	Module	Node
Condition	Only continue if...	Filter	Filter on a route	IF / Filter node
Branch	Different paths for different cases	Paths (paid)	Router	Switch / IF node
Loop	Repeat for each item	Looping (paid)	Iterator + Aggregator	Loop Over Items
Webhook	Start from another app's HTTP call	Webhooks by Zapier (paid)	Custom webhook	Webhook node
Schedule	Run at set times	Schedule by Zapier	Scheduling	Schedule Trigger
AI step	Ask a model to classify, summarise or decide	AI by Zapier / Agents	AI modules	AI Agent and chat model nodes
Billing unit	What you pay for	Tasks (successful actions)	Credits	Executions (cloud); free self-hosted

Same idea, three names. Learn the ideas once, and you can use any of the three tools.



The shape of most automations. Start with trigger → action. Add the check, the AI step and the notification once the basic flow works. Node types shown: Action · AI step · Logic (filter, IF, router) · Output · Trigger (starts the flow).

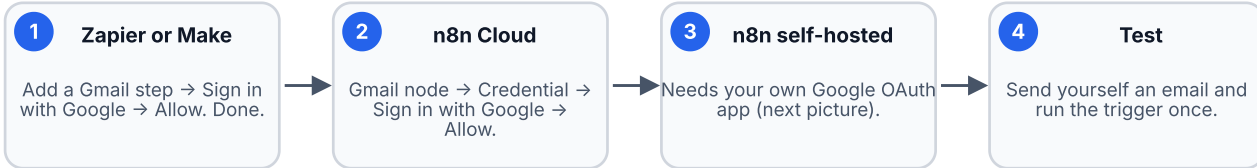
20.2 Choosing the tool

	Zapier	Make	n8n
Ease for beginners	Easiest	Medium (visual canvas)	Medium to hard
Free tier	100 tasks a month, two-step Zaps	1,000 credits a month, 2 active scenarios, 15-minute minimum interval	Community Edition free to self-host (you pay the server)
First paid tier	Professional	Core	Cloud Starter, about €20 to €24 a month
App integrations	8,000+	2,000+	Hundreds of nodes plus any API via HTTP Request
Complex logic	Paths, loops on paid plans	Strong: routers, iterators, data stores	Strongest: code, branches, sub-workflows
AI agents	Zapier Agents, AI steps	AI modules and agents	AI Agent node with memory and tools; MCP
Data stays with you	No (cloud)	No (cloud)	Yes, if self-hosted
Best for	Quick wins for non-technical teams	Visual, multi-branch flows on a budget	Power users, AI agents, high volume, privacy

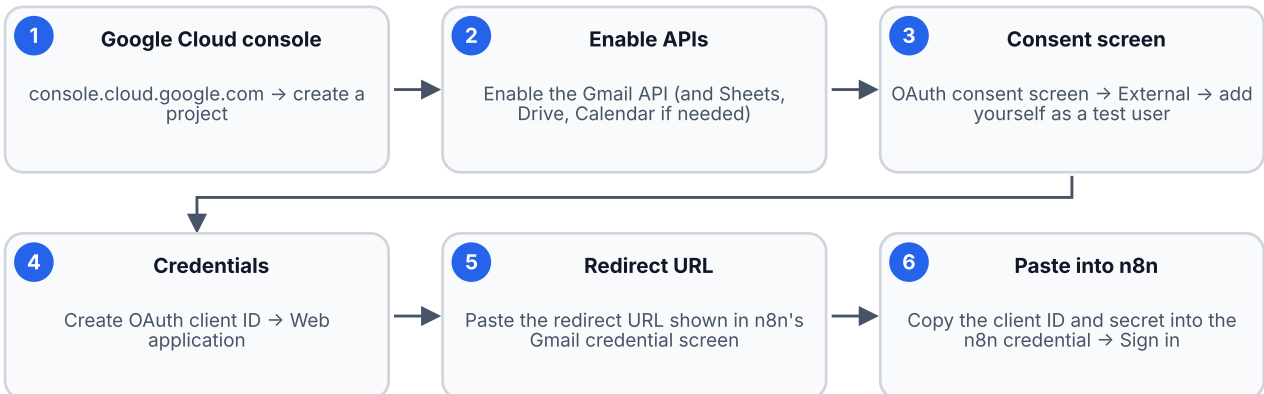
Zapier vs Make vs n8n (checked 23 Oct 2026). A good path is Zapier for your first two automations, then n8n for anything with AI agents or high volume. Check each pricing page before paying.

20.3 How to connect Gmail and Slack (step by step)

20.3.1 Gmail

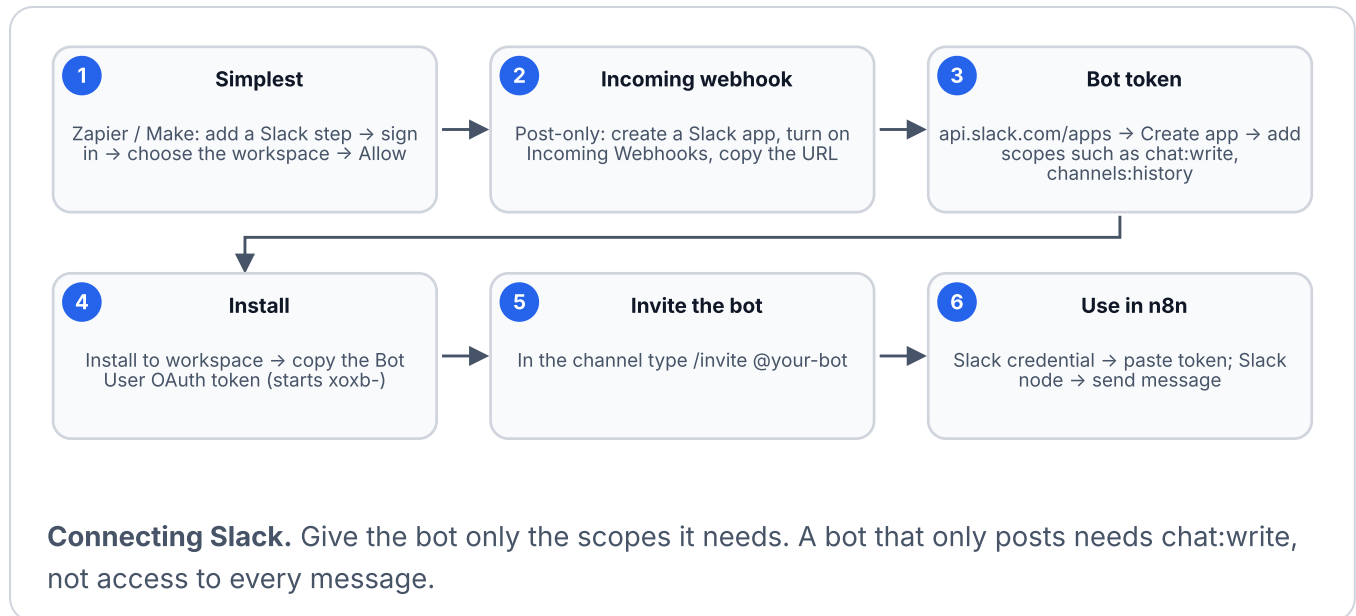


Connecting Gmail. Use a practice Gmail first. Google may show an 'unverified app' warning for self-made OAuth apps; that's expected for personal testing.



Google OAuth app for self-hosted n8n (one time, 15 minutes). The exact menu names in Google Cloud change occasionally. n8n's docs page for Google credentials has the current steps.

20.3.2 Slack



20.4 Zapier · Basic to advanced

Zapier | zapier.com/editor

1. Trigger · Gmail · New email matching search

Search string: from:boss@example.com is:important

2. Action · Slack · Send channel message

Channel: #practice-alerts

Message: Important email from {{From}}: {{Subject}}

Test step

Publish Zap

- 1 Choose the app and the event that starts the Zap, sign in, and set options.
- 2 Map fields from the trigger into the action. The {{...}} pills are data from step 1.
- 3 Test each step with real sample data before publishing.
- 4 Publish turns it on. Check Zap history for runs and errors.

A two-step Zap: Gmail to Slack (illustrative wireframe, not a real product screenshot). Free plans allow two-step Zaps like this one. Multi-step Zaps, filters on paths and webhooks need a paid plan.

Zapier Level 1

Build the Gmail → Slack Zap above. Then a second: **Google Forms → Google Sheets** (new response → add row).

Zapier Level 2 (paid)

- Add a **Filter** (only continue if Subject contains "invoice").
- Use **Formatter** to clean text, dates and numbers.
- Add **Paths** for different cases (VIP vs normal).
- Add an **AI step** (AI by Zapier) to summarise or classify before posting.

Zapier Level 3

- **Webhooks by Zapier** to receive data from your Lovable or Replit app.
- **Zapier Agents** for multi-step tasks described in plain language.
- **Zapier MCP** gives Claude access to Zapier's app actions as tools.
- **Tables and Interfaces** for small internal tools without a separate database.

20.5 Make • Basic to advanced

The wireframe shows a 'Make' scenario interface. At the top, it says 'make.com/scenarios/lead-router'. Below this, a canvas area contains the following modules: 'Google Forms · Watch responses' (labeled 'Trigger'), 'Router' (labeled 'splits into 2 routes'), 'Route A (filter: budget > ₹50,000) → Slack #sales-vip', and 'Route B (all others) → Google Sheets add row'. A 'Run once' button is present. At the bottom, it says 'Scheduling: every 15 minutes' with a toggle switch. On the right, a 'Module settings' panel shows 'Map: {{1.email}}, {{1.budget}}' and 'Operations used: 3 credits'. Three numbered callouts are present: 1 points to the space between modules, 2 points to the 'Run once' button, and 3 points to the scheduling toggle.

- 1 Each module is one app action. Click between modules to add a filter.
- 2 Run once with a test response and inspect the bubbles showing data in and out of each module.
- 3 Turn on scheduling. On the free plan the shortest interval is 15 minutes.

A Make scenario with a router (illustrative wireframe, not a real product screenshot). Iterators split a list into items; aggregators combine items back into one bundle. Data stores keep small tables between runs.

Make essentials

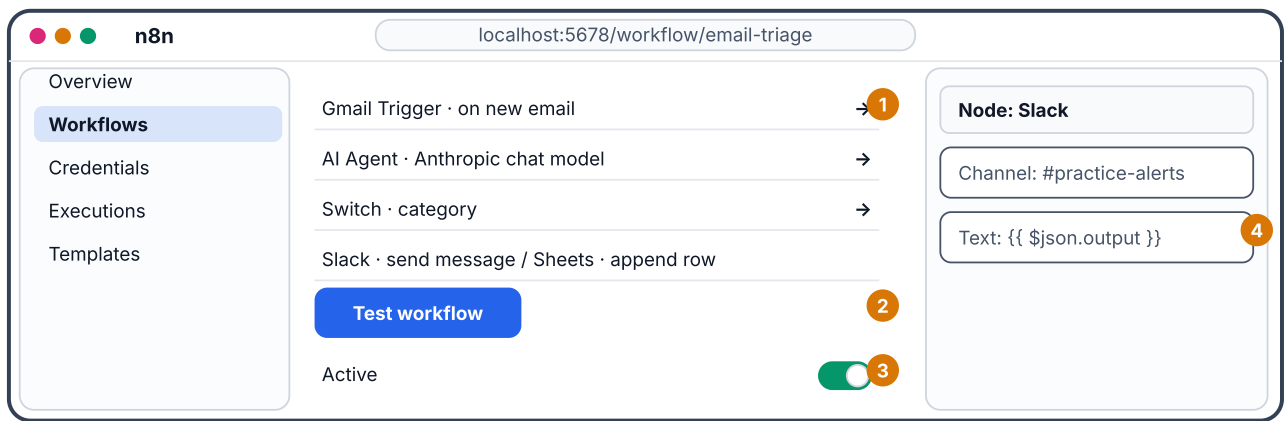
Router for branches, **filters** on each route, **iterator + aggregator** for lists (for example every attachment in an email), **error handlers** (resume, ignore, rollback) on risky modules, and **data stores** for memory between runs. Watch your **credit** use per run on the scenario's history page.

20.6 n8n · Basic to advanced

20.6.1 Getting n8n

Option	How	Cost
On your laptop	Install Node.js, then run <code>npx n8n</code> and open <code>http://localhost:5678</code>	Free
Docker	<code>docker run -it --rm -p 5678:5678 n8nio/n8n</code>	Free
Small cloud server	Docker on a small VPS or a free-tier VM (runs 24/7)	Server cost only
n8n Cloud	Sign up at n8n.io	Paid plans after a trial

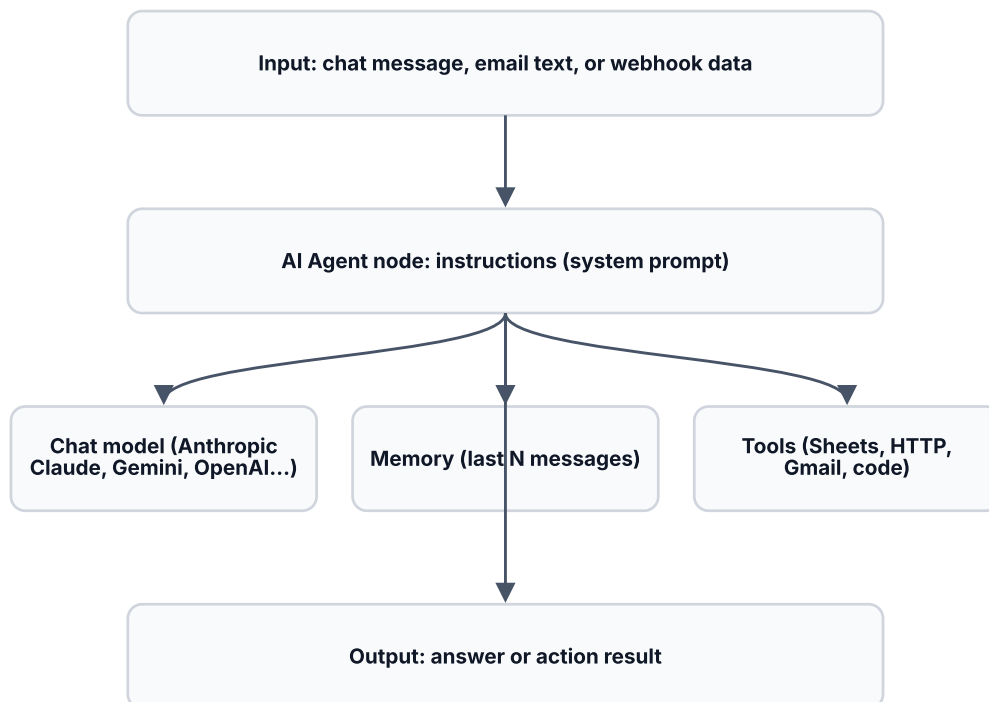
Claude.ai cannot reach `localhost`. For the MCP lab use n8n Cloud, a server, or a tunnel (for example Cloudflare Tunnel or ngrok's free tier).



- 1 Nodes run left to right. Click + to add a node; pick apps, logic or AI nodes.
- 2 Test workflow runs it once. Each node shows its input and output data, which is the best way to debug.
- 3 Active turns on the triggers so it runs automatically.
- 4 Expressions in {{ }} insert data from earlier nodes. \$json is the current item's data.

The n8n editor (illustrative wireframe, not a real product screenshot). Executions shows every past run with its data, so you can see exactly where and why something failed.

20.6.2 AI agents in n8n



The n8n AI Agent node. Add an Anthropic credential with your Claude API key to use Claude as the chat model. Free alternatives for practice include Gemini's free tier and local models through Ollama.

20.6.3 n8n and MCP

- **MCP Server Trigger** node: turns a workflow into an MCP server that exposes the **tool nodes attached to it** (for example a Custom n8n Workflow Tool that runs another workflow). Add its production URL to Claude (Settings → Connectors → Add custom connector) or to Claude Code (`claude mcp add --transport http ...`). Claude can then call your workflow as a tool.
- **MCP Client Tool** node: lets an n8n AI agent use tools from other MCP servers.
- Protect MCP and webhook URLs with **authentication** (header token), so only you can trigger them.

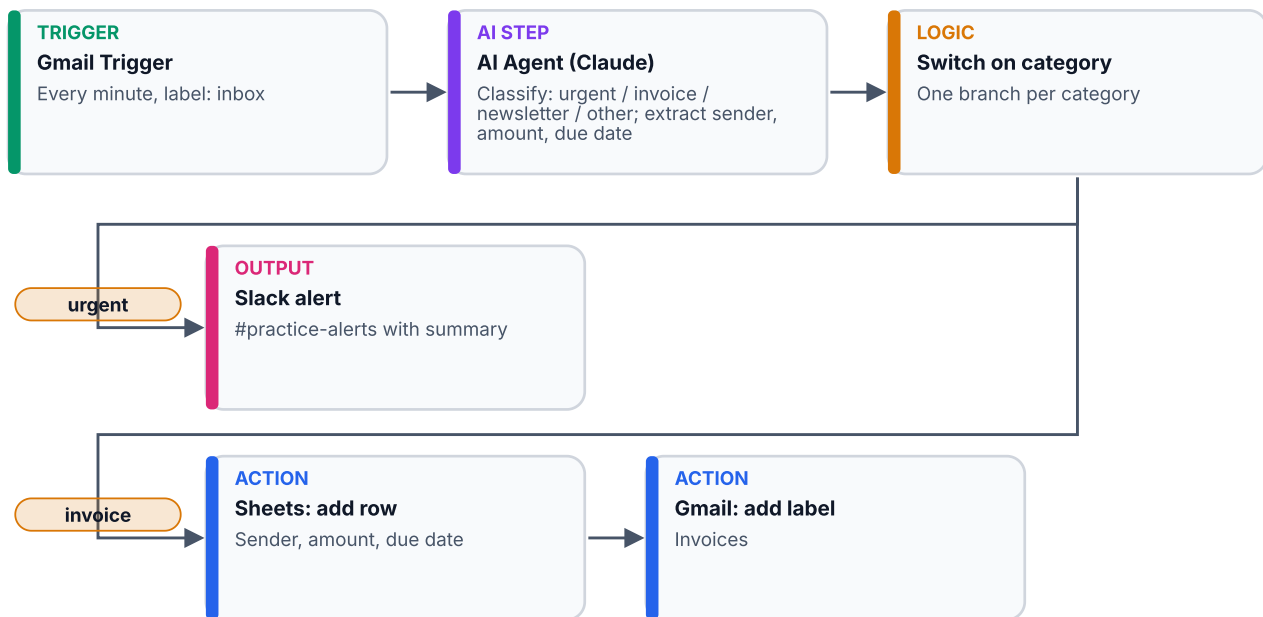
20.7 Labs

Lab 1 · Gmail → Slack in Zapier (Free, 15 minutes)

Build the two-step Zap shown above with a practice Gmail and Slack. Send yourself a matching email and check Slack within a few minutes.

Lab 2 · Form → Sheet → route in Make (Free, 30 minutes)

1. Create a Google Form with Name, Email and Budget.
2. Make: Watch responses → Router → Route A filter Budget > 50000 → Slack; Route B → Sheets add row.
3. Submit two test responses and check both routes.



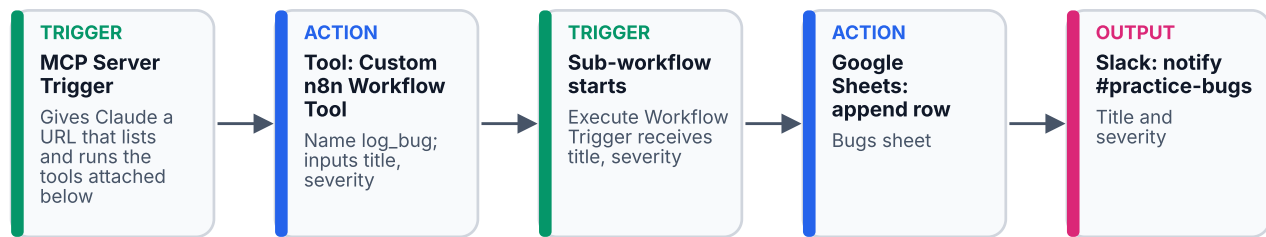
Lab 3 · AI email triage in n8n. Ask the AI step to reply in JSON with fixed fields, so the Switch node can read the category reliably. Node types shown: Action · AI step · Logic (filter, IF, router) · Output · Trigger (starts the flow).

Lab 3 · AI email triage (n8n, 45 minutes)

1. Gmail Trigger (practice account) → AI Agent with the Anthropic chat model.
2. Instructions: "Classify the email as urgent, invoice, newsletter or other. Reply only with JSON: {category, sender, amount, due_date, summary}." Turn on structured output or add a Structured Output Parser.
3. Switch on `{{ $json.output.category }}` → Slack for urgent; Sheets + Gmail label for invoices.
4. Send four test emails, one per category. Check each lands correctly in Executions.

Lab 4 · Morning digest (n8n, 30 minutes)

Schedule Trigger 08:30 → Google Calendar (today's events) + Gmail (unread from the last 12 hours) → AI Agent "Write a 120-word brief with what to prepare" → Slack DM to yourself.



Lab 5 · A tool Claude can call. The MCP Server Trigger doesn't pass data to a next node like other triggers; it exposes the tool nodes connected to it. The workflow tool calls a small sub-workflow that does the work. Add the trigger's production URL to Claude as a custom connector. Node types shown: Action · Output · Trigger (starts the flow).

Lab 5 · Give Claude a tool (n8n Cloud or server, 30 minutes)

1. Build a small sub-workflow: **Execute Workflow Trigger** (inputs `title`, `severity`) → Google Sheets append row → Slack message.
2. In a second workflow add an **MCP Server Trigger** and attach a **Custom n8n Workflow Tool** that calls the sub-workflow. Name it `log_bug` and describe it and its two inputs clearly, because Claude reads that description.
3. Turn on authentication in the trigger, activate the workflow and copy the production URL.
4. Claude → Settings → Connectors → Add custom connector → paste the URL (add the token if asked).
5. In a chat: "Log a bug: checkout button overlaps on small screens, severity high." Approve the tool call and check the sheet and Slack.

Lab 6 · Leads from your Lovable app (45 minutes)

Webhook node (copy its URL) → in your Lovable app (Class 16), ask Lovable to POST each new signup to that URL from a server function → n8n adds the lead to Sheets, asks Claude to score it, and alerts Slack for high scores. Class 21 adds a WhatsApp welcome message.

20.8 Reliability and safety

- **Test with sample data**, then turn on. Keep the first week on "notify me" rather than "act".
- **Error alerts**: in n8n set an **error workflow** that posts failures to Slack; in Make add error handlers; in Zapier turn on error notifications.
- **No duplicates**: store an ID (email ID, form response ID) and skip items you've already processed.
- **Rate limits and costs**: add waits for big batches; set API spend limits; watch task, credit and execution counts.

- **Privacy:** only send the fields the AI step needs. Don't put customer personal data into tools your company hasn't approved.
- **Document** each automation: what it does, owner, accounts used, how to switch it off.

20.9 Exercises with model answers

Exercise 1 · Design the flow

Every support email mentioning "refund" should create a row in a Refunds sheet and alert #support-leads if the amount is over ₹5,000. Sketch the nodes.

Model answer

Gmail Trigger (search "refund") → AI step extracts order ID and amount as JSON → Sheets append row → IF amount > 5000 → Slack alert to #support-leads. Add duplicate protection on the email ID and an error workflow.

Exercise 2 · Pick the tool

A non-technical ops team wants three simple automations this week. A growth team wants an AI agent processing 50,000 events a month and keeping data on company servers. Which tools?

Model answer

Ops team: **Zapier** (fastest to learn; free or Professional depending on steps). Growth team: **self-hosted n8n** (no per-task fees at high volume, AI Agent node, data stays on company infrastructure), with an engineer to run the server.

20.10 Key takeaways

- Every automation is **trigger → (check) → (AI) → action → notify**.
- **Zapier** for quick wins, **Make** for visual branching on a budget, **n8n** for AI agents, volume and privacy.
- Connect Gmail and Slack with **sign-in connectors** in Zapier and Make; n8n self-hosted needs a **Google OAuth app** and a **Slack bot token**.
- **MCP Server Trigger** turns an n8n workflow into a tool Claude can call.

20.11 Check your understanding

CHECK YOUR UNDERSTANDING

What do you need to connect Gmail to self-hosted n8n?

- A. Only your Gmail password
- B. A Google OAuth client ID and secret from a Google Cloud project
- C. A Slack bot token
- D. Nothing

Why: Self-hosted n8n needs your own OAuth app; n8n Cloud, Zapier and Make provide one.

Which Slack scope does a bot need just to post messages?

- A. admin
- B. chat:write
- C. users:read.email
- D. files:write

Why: chat:write is enough to post; give bots the least access they need.

How can Claude call one of your n8n workflows?

- A. Email it the workflow file
- B. Use an MCP Server Trigger and add its URL as a custom connector
- C. Share your n8n password
- D. It can't

Why: The MCP Server Trigger exposes the workflow as a tool over MCP.

Why ask the AI step to answer in JSON?

- A. It's shorter
- B. Later nodes can reliably read fixed fields such as category
- C. Slack requires JSON
- D. It's cheaper

Why: Structured output makes branching and mapping predictable.

20.12 Recommended resources

- [Zapier help](#) · [Make help](#) · [n8n docs](#) · [n8n workflow templates](#)
- [n8n Google credentials guide](#) · [Slack: creating an app](#)
- Official YouTube channels of n8n, Make and Zapier for feature walkthroughs; see Class 23 for creator channels