Build Your AI Assistant: Complete Setup Guide

Transform your daily workflow with a smart AI assistant that handles notes, schedules meetings, and responds intelligently through Slack. This guide walks you through creating your own automated helper using n8n, OpenAI, and Google services.

What You'll Build

Your AI assistant will:

- Respond to Slack commands with intelligent AI-powered answers
- Automatically save conversations to Google Docs
- Create calendar events from natural language requests
- Send confirmations back to Slack
- Handle errors gracefully

Estimated setup time: 30-45 minutes
Monthly cost: $10-50 (mostly OpenAI usage)

Step 1: Create Your n8n Workspace

n8n serves as your automation hub, connecting all services together.

1. **Sign up for n8n**
   - Visit n8n.cloud
   - Click "Sign Up" and create your free account
   - Verify your email and log in
2. **Explore the interface**
   - Familiarize yourself with the workflow canvas
   - Note the node library on the left side

Step 2: Gather Your API Credentials

You'll need three sets of credentials to connect your services.

OpenAI API Key

Provides the AI intelligence for your assistant

1. Go to OpenAI's API platform
2. Sign in or create an account
3. Navigate to "API Keys" in your dashboard
4. Click "Create new secret key"
5. Name your key (e.g., "n8n Assistant") and copy it
6. **Important:** Store this key securely - you won't see it again

Slack Bot Token

Enables communication through Slack

1. Visit Slack API Apps
2. Click "Create New App" → "From scratch"
3. Name your app (e.g., "AI Assistant") and select your workspace
4. In the left sidebar, go to "OAuth & Permissions"
5. Under "Scopes" → "Bot Token Scopes", add:
   - `chat:write` (send messages)
   - `commands` (respond to slash commands)
   - `channels:read` (access channel information)
6. Click "Install to Workspace" and authorize
7. Copy the "Bot User OAuth Token" (starts with `xoxb-`)

Google Cloud Credentials

Connects to Google Docs and Calendar

1. Go to Google Cloud Console
2. Create a new project:
   - Click "Select a project" → "New Project"
   - Name it "AI Assistant" or similar
   - Click "Create"
3. Enable required APIs:
   - Go to "APIs & Services" → "Library"
   - Search and enable "Google Docs API"
   - Search and enable "Google Calendar API"

4. Create credentials:
    - Go to "APIs & Services" → "Credentials"
    - Click "Create Credentials" → "OAuth client ID"
    - Choose "Desktop application"
    - Name it "n8n Assistant"
    - Download the JSON file and save it securely

Step 3: Build Your Workflow

Time to create the magic! In n8n, click "New Workflow" and follow these steps:

Node 1: Slack Trigger

Listens for your commands

1. Click the "+" button and search for "Slack Trigger"
2. Add your Slack credentials using the Bot Token
3. Set trigger type to "Slash Command"
4. Command: `/assistant` (or your preferred command)
5. Test the connection to ensure it works

Node 2: OpenAI Chat

Processes requests with AI

1. Add "OpenAI" node and connect it to the Slack Trigger
2. Use your OpenAI API key for authentication
3. Configure settings:
    - **Resource:** Chat
    - **Operation:** Create a chat completion
    - **Model:** gpt-3.5-turbo (cost-effective) or gpt-4 (more capable)
    - **Messages:** Map the Slack message text using the expression editor

Node 3: Google Docs Integration

Saves conversation history

1. Add "Google Docs" node
2. Upload your Google credentials JSON file

3. Complete the OAuth flow when prompted
4. Configure:
    - **Operation:** Append text to document
    - **Document ID:** Create a Google Doc and copy its ID from the URL
    - **Text:** Combine timestamp, user question, and AI response

Node 4: Google Calendar Integration

Creates events from requests

1. Add "Google Calendar" node
2. Use the same Google credentials
3. Add an "IF" node first to check if the request mentions scheduling
4. Configure calendar node:
    - **Operation:** Create an event
    - **Calendar:** Your primary calendar
    - **Summary:** Extract from AI response or user message
    - **Start/End Time:** Parse from user request

Node 5: Slack Response

Confirms actions back to user

1. Add another "Slack" node
2. Configure:
    - **Operation:** Post message
    - **Channel:** Use the channel from the trigger
    - **Text:** Confirmation message with action summary

Node 6: Error Handling

Gracefully handles failures

1. Add "IF" node to check for errors
2. Add "Slack" node for error notifications
3. Configure to send helpful error messages back to the user

Step 4: Test Your Assistant

1. **Save and activate your workflow** in n8n
2. **Test in Slack:**

```
/assistant remind me to call Mom tomorrow at 5 PM
/assistant what's the weather like today?
/assistant schedule a team meeting for Friday at 2 PM
```

3. **Verify each component works:**
   - AI provides intelligent responses
   - Google Docs captures the conversation
   - Calendar events are created when requested
   - You receive confirmations in Slack
4. **Debug common issues:**
   - Check API key permissions
   - Verify Google OAuth scopes
   - Ensure Slack app has proper permissions
   - Review n8n execution logs for errors

Step 5: Monitor and Optimize

Usage Tracking

- **OpenAI:** Monitor token usage in your dashboard
- **n8n:** Check execution statistics
- **Google:** Review API quotas in Cloud Console

Cost Management

- Start with GPT-3.5-turbo to minimize costs
- Set up billing alerts in OpenAI
- Monitor daily/weekly usage patterns

Enhancement Ideas

- Add more trigger types (email, webhooks)
- Connect additional services (Notion, Trello)
- Create specialized commands for different tasks

- Add natural language processing for better intent recognition

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Troubleshooting Guide

Common Issues:

- **"Authentication failed"** → Double-check API keys and permissions
- **"Calendar event not created"** → Verify date/time parsing in your workflow
- **"Slack not responding"** → Check bot permissions and workspace installation
- **"Google Docs access denied"** → Ensure OAuth scope includes docs editing

Best Practices:

- Test each node individually before connecting the full workflow
- Use descriptive names for your workflows and nodes
- Add error handling to every critical step
- Keep your API keys secure and rotate them regularly

You're All Set! 🎉

Your AI assistant is now live and ready to help streamline your daily tasks. Start with simple commands and gradually explore more complex automation possibilities. The system will learn your patterns and become even more helpful over time.

Next Steps:

- Experiment with different AI prompts for better responses
- Add more integrations based on your workflow needs
- Share successful command patterns with your team
- Consider upgrading to more powerful AI models as your usage grows