



# API KEY MANAGEMENT GUIDE

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Workflow Automation Delivery Framework

ENTERPRISE EDITION

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# Table of Contents

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Table of Contents

API Key Management Guide

Complete Guide to Credential Handling & Billing

---

Core Principle

---

Client API Account Setup

Step-by-Step Process

---

---

Service-Specific Setup Guides

OpenAI

---

Anthropic (Claude)

---

Google Workspace

---

HubSpot

---

Slack

---

---

Secure Credential Transfer

When Client Must Share With You

---

One-Time Share Link Setup (1Password)

---

Bitwarden Send

---

---

Credential Organization in n8n

Naming Convention

---

Credential Documentation

---

---

Billing Transparency

Why Client-Owned Billing Matters

---

Usage Monitoring Dashboard

---

Cost Estimation Template

---

---

Test vs Production Credentials

Best Practice: Separate Environments

---

Credential Swap Process

---

---

Common Issues & Solutions

Issue: Client Can't Create API Key

---

Issue: Credential Not Working

---

Issue: Client Worried About Security

---

Issue: Client Wants You to Own Credentials

---

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## Quick Reference

### Credential Setup Checklist

---

### Handover Credential Checklist

---

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# API Key Management Guide

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## Complete Guide to Credential Handling & Billing

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### Core Principle

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CLIENT OWNS ALL API KEYS  
CLIENT PAYS FOR ALL USAGE  
YOU NEVER SEE RAW CREDENTIAL VALUES (WHEN POSSIBLE)

This creates:

- Transparent billing
  - Clean ownership
  - Easy handover
  - No disputes
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## Client API Account Setup

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### Step-by-Step Process

#### 1. Identify Required Services

Common Services for AI Workflows:  
OpenAI / Anthropic (AI models)  
Google Workspace (Gmail, Calendar, Drive)  
Microsoft 365 (Outlook, Calendar)  
CRM (HubSpot, Salesforce, Pipedrive)  
Communication (Slack, Discord, Twilio)  
Databases (Airtable, Notion, Supabase)  
Payment (Stripe)  
Other: \_\_\_\_\_

## 2. Create Setup Guide for Each

For each service, create a Loom video showing:

- How to sign up
- How to find API settings
- How to generate key
- Where to paste in n8n
- How to verify it works

## 3. Send Instructions to Client

Email Template:

Subject: API Account Setup - [Project Name]

Hi [Name],

Before we can build your automation, you'll need to set up accounts and API keys for the following services:

REQUIRED:

1. OpenAI - for AI processing  
Video guide: [Loom link]
2. Google Workspace - for email/calendar  
Video guide: [Loom link]
3. HubSpot - for CRM integration  
Video guide: [Loom link]

STEPS FOR EACH:

1. Create account (or use existing)
2. Go to API settings
3. Generate new API key
4. Enter directly in n8n (I'll show you)

IMPORTANT:

- You'll own these accounts and pay for usage directly
- This gives you full visibility into costs
- You can revoke access anytime

Let me know when ready and we'll configure together!

## Service-Specific Setup Guides

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### OpenAI

#### OPENAI API KEY SETUP:

1. Go to: `platform.openai.com`
2. Sign in or create account
3. Add billing info (Settings Billing)
4. Set usage limits (important!)
5. Go to: API Keys
6. Click: "Create new secret key"
7. Name it: "n8n Production"
8. Copy key IMMEDIATELY (shown once only)
9. In n8n:
  - Go to Credentials
  - Add Credential OpenAI
  - Paste key
  - Save
10. Test connection

#### BILLING TIPS:

- Set monthly budget limit
- Set usage alerts
- Monitor dashboard regularly
- Start with GPT-3.5 before GPT-4



## Anthropic (Claude)

### ANTHROPIC API KEY SETUP:

1. Go to: `console.anthropic.com`
2. Sign in or create account
3. Complete verification
4. Go to: API Keys
5. Click: "Create Key"
6. Name it: "n8n Production"
7. Copy key IMMEDIATELY
8. In n8n:
  - Add Credential Anthropic
  - Paste key
  - Save
9. Test connection

### BILLING:

- Pre-purchase credits
- Monitor usage in console

## Google Workspace

### GOOGLE API SETUP:

For OAuth (Gmail, Calendar, Drive):

1. Go to: `console.cloud.google.com`
2. Create new project
3. Enable required APIs:
  - Gmail API
  - Google Calendar API
  - Google Drive API
4. Configure OAuth consent screen
5. Create OAuth 2.0 credentials
6. Download client ID and secret
7. In n8n:
  - Add Google credential type
  - Enter client ID and secret
  - Authorize with Google account
8. Test connection

FOR SERVICE ACCOUNTS (Server-to-Server):

- Create service account
- Download JSON key
- Grant access to resources
- Configure in n8n

## HubSpot

### HUBSPOT API KEY SETUP:

1. Log in to HubSpot
2. Go to: Settings (gear icon)
3. Navigate to: Integrations Private Apps
4. Create a private app
5. Select required scopes:
  - contacts (read/write)
  - deals (read/write)
  - etc.
6. Generate access token
7. Copy token
8. In n8n:
  - Add Credential HubSpot
  - Select "Access Token"
  - Paste token
  - Save
9. Test connection

## Slack

### SLACK API SETUP:

1. Go to: [api.slack.com/apps](https://api.slack.com/apps)
2. Create new app
3. Choose "From scratch"
4. Select workspace
5. Add Bot Token Scopes:
  - chat:write
  - channels:read
  - users:read
  - etc.
6. Install to workspace
7. Copy Bot User OAuth Token
8. In n8n:
  - Add Credential Slack
  - Paste token
  - Save
9. Test by sending message

# Secure Credential Transfer

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## When Client Must Share With You

### Preferred Methods (In Order):

#### 1. PASSWORD MANAGER (Best)

- 1Password
- Bitwarden
- LastPass

##### Process:

- a. Client creates shared vault
- b. OR creates one-time share link
- c. Link sent via Slack/email
- d. You access and enter in n8n
- e. Link expires

#### 2. DIRECT ENTRY (Second Best)

- Schedule video call
- Client types credentials
- You never see the value
- Credentials go directly to n8n

#### 3. ENCRYPTED MESSAGE

- Client sends via Signal
- Or uses encrypted email
- Delete after entering

##### NEVER:

- Plain text email
- Slack/Teams message
- Shared Google Doc
- Screenshot
- Text message

## One-Time Share Link Setup (1Password)

### 1PASSWORD SECURE SHARING:

1. Client opens 1Password
2. Find or create credential entry
3. Click Share
4. Choose "Anyone with link"
5. Set expiration: "1 hour"
6. Set view limit: "1 view"
7. Copy link
8. Send link to you
9. You click link, copy value
10. Enter in n8n
11. Link auto-expires

## Bitwarden Send

### BITWARDEN SEND SETUP:

1. Client opens Bitwarden
2. Go to "Send"
3. Create new Send
4. Select "Text" type
5. Enter credential value
6. Set options:
  - Deletion date: 1 hour
  - Max access count: 1
  - Password protect (optional)
7. Create Send
8. Copy link
9. Send to you
10. You access, copy, enter in n8n

# Credential Organization in n8n

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## Naming Convention

FORMAT: [Service] - [Environment] - [Purpose]

EXAMPLES:

OpenAI - Production - Main  
OpenAI - Testing - Development  
Google - Production - Gmail Access  
HubSpot - Production - CRM

API Key 1  
New credential  
test123

## Credential Documentation

Create a credential inventory (store securely, not in workflow):

```
# Credential Inventory - [Project Name]

## Production Credentials

| Name in n8n | Service | Owner | Created | Last Rotated |
|-----|-----|-----|-----|-----|
| [Service] - Production | [Service] | Client | 2025-01-15 | 2025-01-15 |
| Google - Production | Google | Client | 2025-01-15 | 2025-01-15 |
| HubSpot - Production | HubSpot | Client | 2025-01-16 | 2025-01-16 |

## Test Credentials (If Separate)

| Name in n8n | Service | Owner | Notes |
|-----|-----|-----|-----|
| OpenAI - Testing | OpenAI | Consultant | Temporary, remove at handover |

## Credential Rotation Schedule

| Credential | Next Rotation | Responsible |
|-----|-----|-----|
| All credentials | Every 90 days | Client |
```

# Billing Transparency

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## Why Client-Owned Billing Matters

### BENEFITS:

#### For Client:

- See exactly what they pay
- Understand usage patterns
- Control spending limits
- No markup concerns
- Direct relationship with vendor

#### For You:

- No billing disputes
- No cash flow issues
- No usage explanations needed
- Clean separation of concerns
- Easier offboarding

## Usage Monitoring Dashboard

Help clients set up monitoring:

### FOR OPENAI:

1. platform.openai.com Usage
2. Set monthly budget limit
3. Set alert thresholds
4. Review daily/weekly
5. Track by API key if multiple

### FOR OTHER SERVICES:

- Share dashboard access
- Set up alerts
- Create monthly review process

## Cost Estimation Template

### MONTHLY COST ESTIMATE

Service: OpenAI  
Model: GPT-4  
Estimated requests/month: 1,000  
Average tokens per request: 2,000  
Estimated cost: ~\$X/month

Service: [Other]  
Estimated usage: [X]  
Estimated cost: \$X/month

TOTAL ESTIMATED: \$X/month

#### Notes:

- Actual usage may vary
- Monitor and adjust as needed
- Costs are client's responsibility

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## Test vs Production Credentials

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### Best Practice: Separate Environments

#### TEST ENVIRONMENT:

- Consultant-owned credentials (temporary)
- Limited budget/usage
- Sandboxed data
- For development only

#### PRODUCTION ENVIRONMENT:

- Client-owned credentials
- Full budget as needed
- Real data
- For live use

#### AT HANDOVER:

- Remove all test credentials
- Ensure only production creds remain
- Client verifies access



## Credential Swap Process

### HANDOVER CREDENTIAL SWAP:

1. Identify test credentials to remove:  
OpenAI - Testing  
[Other test creds]
2. Verify production credentials exist:  
OpenAI - Production  
[All required prod creds]
3. Update workflow to use production:
  - Open each node using credentials
  - Change from test to production
  - Save workflow
4. Test workflow with production creds:  
Trigger test execution  
Verify all nodes work  
Check no errors
5. Remove test credentials:  
Go to Credentials  
Delete each test credential  
Verify not in use
6. Revoke test API keys in services:  
OpenAI: Delete test key  
[Other services]

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## Common Issues & Solutions

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### Issue: Client Can't Create API Key

#### SOLUTION:

1. Verify they have correct permissions
2. Check account is verified
3. Billing may need to be set up first
4. Try different browser/incognito
5. Contact service support

## Issue: Credential Not Working

### TROUBLESHOOTING:

1. Copy key again (no extra spaces)
2. Check key hasn't expired
3. Verify correct key type
4. Check API scopes/permissions
5. Test in Postman/curl first
6. Check rate limits/billing

## Issue: Client Worried About Security

### REASSURANCE:

- Credentials encrypted in n8n
- You don't see raw values (in workflow)
- They can revoke anytime
- They control the account
- Standard industry practice

## Issue: Client Wants You to Own Credentials

### RESPONSE:

"I understand you want to simplify things! However, having you own the credentials is actually better because:

1. You see exactly what you're paying
2. You have full control
3. If we ever stop working together, there's no transition needed
4. It's cleaner for security and compliance

I'll make the setup super easy with video guides!"

## Quick Reference

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### Credential Setup Checklist

FOR EACH REQUIRED SERVICE:

Service: \_\_\_\_\_  
Client has account  
Billing configured  
API key generated  
Appropriate permissions/scopes  
Key entered in n8n  
Connection tested  
Naming convention followed  
Documented in inventory

### Handover Credential Checklist

All test credentials removed from n8n  
All test API keys revoked in services  
Only production credentials remain  
All credentials are client-owned  
Credential inventory delivered  
Client knows how to rotate keys  
Client knows how to monitor usage

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**Next:** See [04-testing-qa-framework.md](#) for testing methodology.

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