N8N-Invoice Processor

Setup & User Guide

Overview

The **N8N-Invoice Processor** is an automated workflow designed to collect, process, and organize incoming invoices from email, leveraging AI and Microsoft 365 integration for seamless end-to-end handling. Each morning, it aggregates unread emails with invoice attachments, extracts invoice data using AI, manages PDFs and storage, updates invoice records in Excel, and sends a daily digest to your team.

> - **Automates** inbox-to-records invoice workflow.
> - **AI-powered** extraction for structured invoice data from PDFs and emails.
> - **Integrates** with Microsoft Outlook, OneDrive, and Excel.
> - **Sends** daily invoice digests for visibility.

Prerequisites

- **n8n** (hosted or desktop, version 1.24+ strongly recommended)
- Microsoft 365 account with Outlook and Excel Online (with permissions to access/moderate emails and update files)
- OneDrive (or SharePoint) for storing invoices
- Access to OpenAI API for AI-powered invoice extraction (GPT-4.1-mini recommended)
- PDF invoices or receipts regularly received via Outlook email
- Administrative credentials and setup access to n8n and Microsoft services

Installation

1. **Download the Invoice Processor workflow JSON file.**
   - Obtain from your project manager or from AIS Solutions Workspace.

2. **Import into n8n:**
   a. From within n8n, click **Workflows** → **Import from File**.

b. Select the `.json` workflow file and confirm.
c. Open the imported workflow. It should appear as **N8N-Invoice Processor** in your list.

3. **Review the workflow nodes:** Verify the 27 nodes are present and labeled as described in this guide.
4. **Proceed to configuration** before activating the workflow.

Configuration

Credentials Setup

1. **Microsoft Outlook**
   - Create an **OAuth2** or **Service Account** credential in n8n to allow access to the target mailbox (including read, mark, move, and attachment access permissions).

2. **Microsoft Excel**
   - Create an **OAuth2** credential for Excel Online. Ensure your chosen account has edit permissions on the invoice tracking spreadsheet.

3. **OpenAI**
   - In your OpenAI account, create an API key with GPT-4 (recommended).
   - Add a credential for OpenAI in n8n (`OpenAI API` type) and paste your API key.

4. **OneDrive (PDF Uploads)**
   - If uploading documents to OneDrive, ensure a proper **HTTP Request** credential in n8n and required folder permissions.

Placeholders & Configuration Fields

Placeholder / Config Field	Description & Example Value
YOUR_EMAIL	*The email address for the mailbox receiving invoices.* `ap@yourcompany.com`
YOUR_TENANT	*Azure AD tenant ID (for OAuth2 and API calls).* `contoso.onmicrosoft.com` or GUID format
YOUR_USER	*User ID or principal for the mailbox (if different than* `YOUR_EMAIL` *).*
YOUR_INBOX_FOLDER_ID	*Outlook/Microsoft Graph folder ID for the inbox where invoices arrive.* Get by fetching folder list through Graph API or n8n Outlook node. Example: `AAMkADkAAAABkAADLTsAAA=`
YOUR_PROCESSED_FOLDER_ID	*Outlook Folder ID to which processed invoice emails are moved.*

Placeholder / Config Field	Description & Example Value
YOUR_COMPANY_NAME	*Friendly company or business name for branding in reports & messages.*
digestTo	*Email address(es) to receive the consolidated invoice digest (daily summary email).* `finance@yourcompany.com`
oneDriveFolderBase	*Root folder or path in OneDrive/SharePoint for storing uploaded PDFs.* `/Invoices/Automation`
oneDriveHost	*Host URL for OneDrive instance, e.g.,* `https://yourcompany-my.sharepoint.com`
oneDriveBasePath	*Base virtual path for PDF storage beneath the host (e.g.,* `/personal/username_domain_com/Documents` *).*

Tip: All placeholders must be filled or mapped to environment variables/n8n secrets before activation of the workflow.

Usage

> **How it works:**
>
> 1. The workflow **triggers automatically every day at 7am** (adjustable in the trigger node).
> 2. **Fetches unread Outlook emails** (from the configured folder) with attachments.
> 3. **Extracts text from PDFs** using OCR and extracts invoice details via AI.
> 4. **Classifies** and **formats** invoice data, updates your Excel tracker or handles receipts/actions.
> 5. **Uploads invoice PDFs** to OneDrive, capturing their shareable links.
> 6. **Marks emails as read** and moves processed items to the specified folder.
> 7. **Sends a daily digest** to the finance team.

Step-by-Step Operation

1. **Activate the workflow in n8n** after all configuration and credentials are validated.
2. **Invoicing emails arrive** (usually routed to a dedicated inbox/folder).
3. **Each morning, the workflow runs:**
   - Checks emails for attachments (PDFs), extracts them for text/AI processing.
   - Calls GPT-4.1-mini (or your selected LLM provider) for invoice data parsing.

4. **Invoice rows are recorded** or receipts applied in your Excel tracker.
5. **Emails are updated**—marked as read, moved to "Processed".
6. **Team receives daily report** at the end of the run.

Manual/On-Demand Runs

For urgent or test processing, you may manually execute the workflow in n8n via the **Execute Workflow** button. Ensure your email and Excel records are in sync prior to manual runs to avoid duplicates.

Customization

- **Change the schedule:** Adjust the **Every Morning at 7am** trigger node to fit your preferred time.
- **Excel workbook/sheet changes:** Update the `Read Existing Invoices in Excel` and write nodes accordingly if moving the tracker file or changing its schema.
- **Digest recipients:** Modify `digestTo` to change who receives daily summary reports.

Troubleshooting

- **Credential errors:** Double-check each integration in n8n's credentials manager. If Microsoft 365 tokens expire, refresh or re-authorize.
- **Email not processed:** Ensure the `YOUR_INBOX_FOLDER_ID` is correct, mailbox isn't blocked, and n8n is not rate-limited/out of memory.
- **Excel not updating:** Confirm target file exists, account has "edit" permission, and the worksheet name/table columns match what's in the workflow.
- **PDFs not uploading:** Check `oneDriveHost`, path, and permissions. Review HTTP node and endpoint authentication.
- **AI/LLM failures:** Review OpenAI API usage quotas, network errors, or parsing issues if invoice extraction fails.
- **Daily digest not sent:** Validate that `digestTo` is set and that your email sender credential is active and permitted.
- **Debugging individual nodes:** Use n8n's "Execute Node" feature to step through problem branches. Logs will indicate which node failed and why.

For advanced error investigation, increase n8n logging and/or export error outputs for detailed review. Always mask sensitive data before sharing logs externally.

Support

- Email: support@ais.email
- Website: automatedintelligentsolutions.com

- Phone: 404-293-0331 (9am–6pm US/Eastern, Mon–Fri)
- For premium implementation or customization assistance, contact our solutions team.