

# Distributor Onboarding System

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## 1 Overview

This document outlines the implementation of a **self-service distributor onboarding system** that simplifies the process of integrating various **ERP systems** with our data pipeline. The system consists of:

- A web portal for distributor registration and ERP selection.
- A C# (ASP.NET Core) backend for managing ERP authentication and configurations.
- Apache MiNiFi deployed at distributor sites for local ERP data extraction.
- Apache NiFi for central data ingestion, transformation, and routing to AWS S3.

This approach ensures **scalability, security, and ease of use** for non-technical distributors.

## 1.1 System Components

### 1.1.1 Web Portal (Next.js + Auth0)

- Distributors **log in** via Auth0.
- Select their **ERP** system from a dropdown list.
- Enter **API** credentials, database connection details, or **FTP** settings.
- Download a **pre-configured** MiNiFi agent for their system.

### 1.1.2 Backend API (C# + ASP.NET Core)

- Handles distributor authentication & authorization.
- **Validates** ERP credentials and ensures secure storage.
- **Generates** MiNiFi configuration files **dynamically** based on ERP type.
- Communicates with Apache NiFi to register new distributors.

### 1.1.3 Apache MiNiFi (Deployed at Distributor's Location)

- Extracts ERP data via API, database queries, or **FTP/SFTP**.
- Buffers and transmits data securely to NiFi.
- Handles network outages with built-in retry mechanisms.

### 1.1.4 Apache NiFi (Central Data Processing Hub)

- Receives data from MiNiFi agents.
- Transforms and routes data to AWS S3.
- Handles error logging, retries, and alerting.

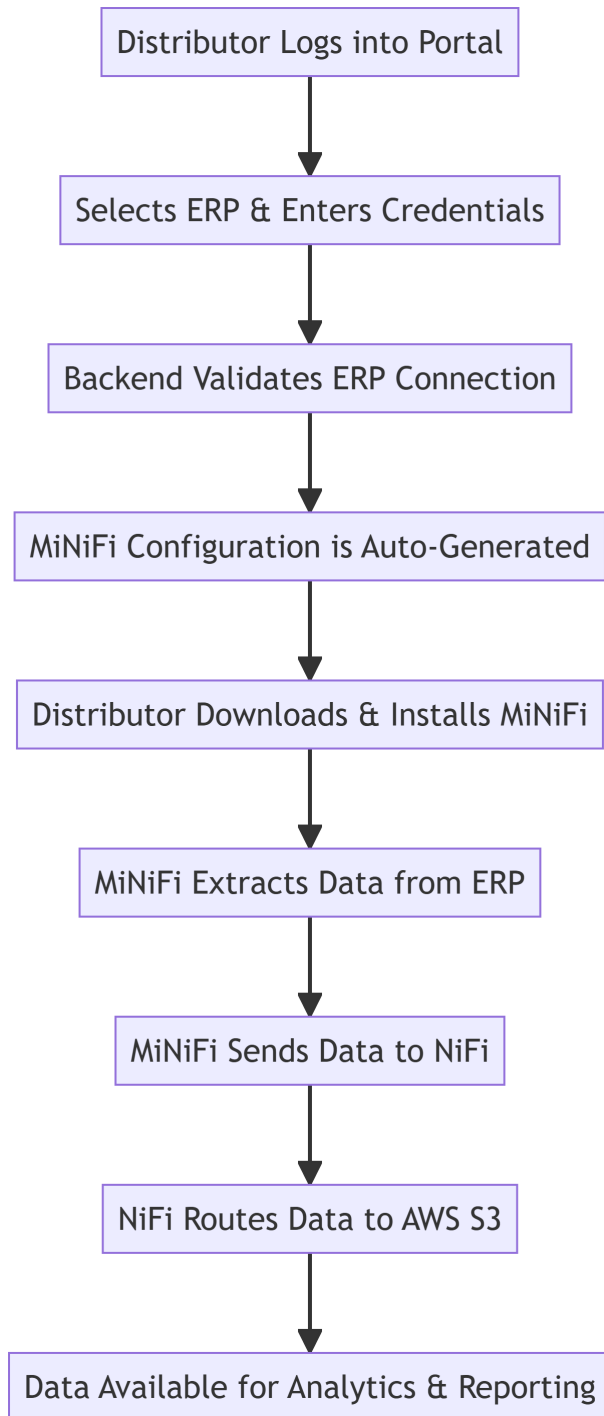
## 1.2 ERP System Integration Strategy

### 1.2.1 ERP Categorization & Integration Methods

ERP Type	Integration Method	Examples
API-Based	REST/SOAP API Calls	NetSuite, SAP ERP, QuickBooks, ASC Portal
Database-Driven	SQL (JDBC/ODBC) Queries	Sage 300, Epicor Prophet 21, CloudSuite

ERP Type	Integration Method	Examples
File-Based	FTP/SFTP, CSV/XML Parsing	TGI Enterprise 21, OneView, HP (Excel)
Legacy Systems	AS/400, Custom In-House Systems	DARTS, Samco Software

### 1.2.2 Integration Workflow



### 1.3 Expected Benefits

- **Simplified onboarding** – Non-technical distributors can self-register and integrate their ERP systems.
- **Automated ERP data extraction** – Reduces manual intervention.
- **Secure & scalable solution** – MiNiFi ensures local data security and retries failed transfers.
- **Cloud-ready architecture** – AWS S3 and NiFi provide a robust and extensible pipeline.