

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.**

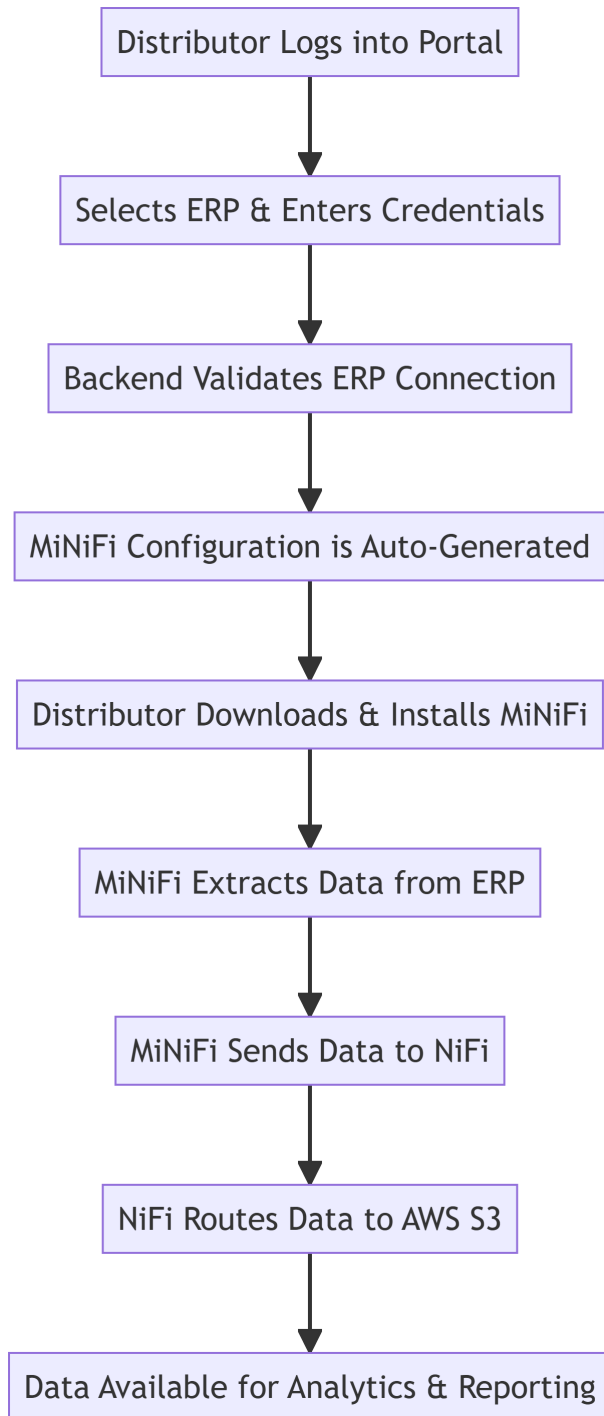
1.2 ERP System Integration Strategy

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.