



Walmart Purchase Order Integration with IFS ERP via Pulse API

Enhancing Efficiency, Accuracy, and Real-Time Visibility through Pulse API
Integration

Date: 23-OCT-2025

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Executive Summary

This case study explores the migration of the Purchase Order integration process for Walmart from the legacy Baan ERP system to the modern IFS ERP system via API.

The transition aimed to modernize processes and enhance overall functionality while ensuring seamless communication between systems.

The primary objective was to enable accurate order tracking, efficient communication, and real-time acknowledgment delivery to Walmart using the Pulse API.

The workflow begins with receiving Purchase Orders (POs) via API, which triggers automated email notifications for manual order creation in IFS.

Subsequent stages—Order Acknowledgment, Shipping Acknowledgment, and Invoice Acknowledgment—are managed automatically through the Pulse API.

This hybrid model combines human verification with automation, providing real-time visibility across the PO and shipment lifecycle while maintaining operational accuracy.

Background / Challenge

The key initiative was to transition Walmart's Purchase Order integration from the legacy Baan ERP system to IFS ERP.

During this process, several technical and operational challenges were identified:

- **API Rate Limits:** Restrictions on API call volume affecting large order creation.
- **Configuration Mismatches:** Rejections in IFS due to mismatched configuration or missing data.
- **Acknowledgment Delays:** Manual order creation occasionally led to delayed acknowledgments.
- **Order Mismatches:** Inconsistencies between Walmart's and IFS's order data caused incorrect acknowledgments.
- **Untimely Updates:** Shipment or invoice data not being updated in IFS promptly.
- **Invoice Assignment Issues:** Invoice numbers occasionally not assigned correctly, delaying invoice acknowledgments.
- **Error Handling Gaps:** Silent failures or lack of detailed logging hindered troubleshooting.

These issues highlighted the need for a more **robust, reliable, and scalable** integration framework.

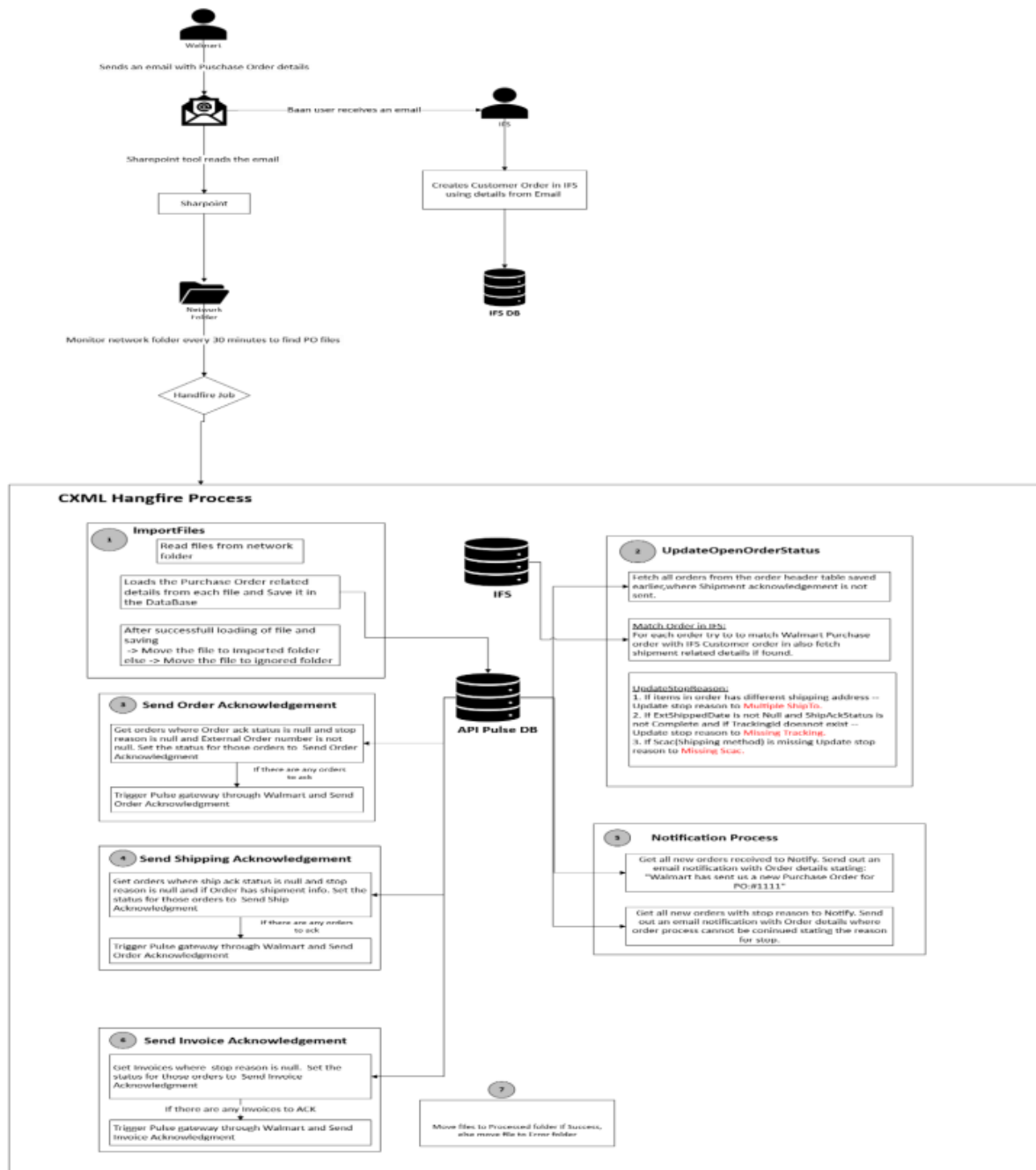
Solution / Approach

The solution implemented a structured **API-based integration workflow** to bridge Walmart's systems with IFS ERP, ensuring accuracy, visibility, and operational control.

Integration Workflow Steps

- 1. Receive Purchase Order from Walmart:**
API receives POs from Walmart and initiates the workflow.
- 2. Automated Notification:**
An automated email is sent to the internal team, providing PO details for review.
- 3. Manual Order Creation in IFS:**
The team manually creates the purchase order in IFS, maintaining oversight and data verification.
- 4. Order Validation and Retrieval:**
The API checks IFS periodically to confirm order creation and retrieve valid PO data.
- 5. Order Acknowledgment:**
Once verified, an acknowledgment is sent to Walmart through the Pulse API confirming order processing.
- 6. Shipping Acknowledgment:**
When shipment data becomes available, the API validates and transmits acknowledgment updates to Walmart.
- 7. Invoice Acknowledgment:**
After invoicing, the API sends real-time invoice acknowledgment updates to Walmart, ensuring full visibility into the transaction lifecycle.

Flow Chart



Results / Metrics

The implemented solution delivered significant improvements in integration reliability and performance:

- **Enhanced Communication:** Automated notifications and acknowledgments minimized manual follow-ups and delays.
- **Improved Accuracy:** API-based validation ensured alignment between Walmart and IFS records.
- **Scalable Integration:** Architecture supports future expansion for additional document types and business processes.
- **Real-Time Tracking:** End-to-end visibility into the PO lifecycle enabled proactive monitoring and status updates.

Lessons Learned / Best Practices

Key insights from this project informed future API integration best practices:

- **Handling Bulk Orders:** API throttling and queue-based order handling improved reliability.
- **System Resilience:** Retry and failover strategies ensured minimal disruption.
- **Data Synchronization:** Automated reconciliation maintained data consistency across systems.
- **Timely Acknowledgment:** Timestamp-based polling guaranteed prompt shipping and invoice acknowledgments.
- **Error Management:** Comprehensive logging and real-time alerts prevented data loss and simplified troubleshooting.

About ESS

Enterprise Software Solutions Inc. (ESS) is a premier enterprise resource management (ERP) implementation and support company, recognized for delivering successful projects across **manufacturing, distribution, and service** verticals for over **15 years**.

As a dedicated **IFS Gold Partner**, ESS specializes in comprehensive ERP implementation and migration services across **manufacturing, construction, and service** sectors.

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ESS offers complete, end-to-end ERP services, including:

- Full-cycle ERP implementation — from IFS Cloud licensing and customization to deployment support across service, manufacturing, and finance modules.
- Post-implementation support and managed services.
- Seamless third-party integration using APIs and middleware.
- Robust data migration and transformation solutions.

With **over 50 years of combined team experience**, ESS has successfully implemented and customized ERP systems for industries including **service, engineering, manufacturing, and distribution**. ESS also has deep expertise in **Epicor P21 ERP** implementation.

Technical Proficiency

ESS is widely known for its ability to:

- Bridge legacy and modern ERP platforms — synchronizing systems like IFS and Baan.
- Leverage deep technical knowledge in **RESTful APIs** and **IFS customization**.
- Develop proprietary extensions around **Microsoft, SAP, BAAN**, and **IFS** technologies.
- Enable **predictive maintenance** through IFS ERP implementations.

Mission and Focus

ESS's mission is to reduce client risk by ensuring **flawless, on-time delivery** through proven experience, technical innovation, and proprietary extensions.

We help organizations overcome challenges such as:

- Growth bottlenecks and scalability limitations.
- Risks from end-of-life or unsupported legacy systems.
- Manual, error-prone customer integrations.
- Rising operational costs from outdated technologies.

By combining strong industry expertise with modern ERP innovation, **ESS ensures every client's investment delivers a long-term strategic advantage**.

Global Presence

ESS operates globally, with offices located in **Kansas (USA)** and **Hyderabad (India)**.