Smart Integrator

Integrate Idempiere ERP/distros from/to other applications using a selective asynchonous approach with Kafka message broker/Bridge technologies

Pedro Rozo
CEO
MBA / PMP / Certified Java EE Architect
Senior Global IT Consultant
Colombia / Canadá / United Kingdom

SmartJSP
Large-scale open source software integration

IT Consulting
100%
Open Source

AGENDA

1) Context
2) Design & Architecture
3) Typical topology
4) Design & Architecture
5) Product Evolution – from replication to Integration
6) Future layers
7) Quick review of product manual
8) Demo

Pedro Rozo

- Systems Engineer - Universidad Distrital F.J.C.
- MBA – Company Direction Universidad San Pablo – España
- Project Management Professional – PMP - PMI
- Oracle Certified Enterprise Architect for Java (SCEA)
- **CEO - SmartJSP Solutions**
- Global Senior Consultant expert in Digital Transformation using Open Source

- +20 years of global IT experience delivering solutions for many industries such as: Retail, Telecommunications, Insurance, Healthcare, Agriculture and Finance, 100% Bilingual (Spanish & English) with a ideal balance of executive and technical strengths. Canadian & Colombian citizen.
- University Teacher for Post-graduate IT training and conference speaker for Universidad Distrital at Bogotá, and Universidad Tecnológica de Panama, also an IT trainer for SOA, middleware, architecture, integration and enterprise open source solutions for large organizations.

Our Company

- We create real agile & specialized IT solutions (Cloud, Onsite & Mobile) **integrating enterprise open source products** for distributed environments applying best practices and Global open standards.

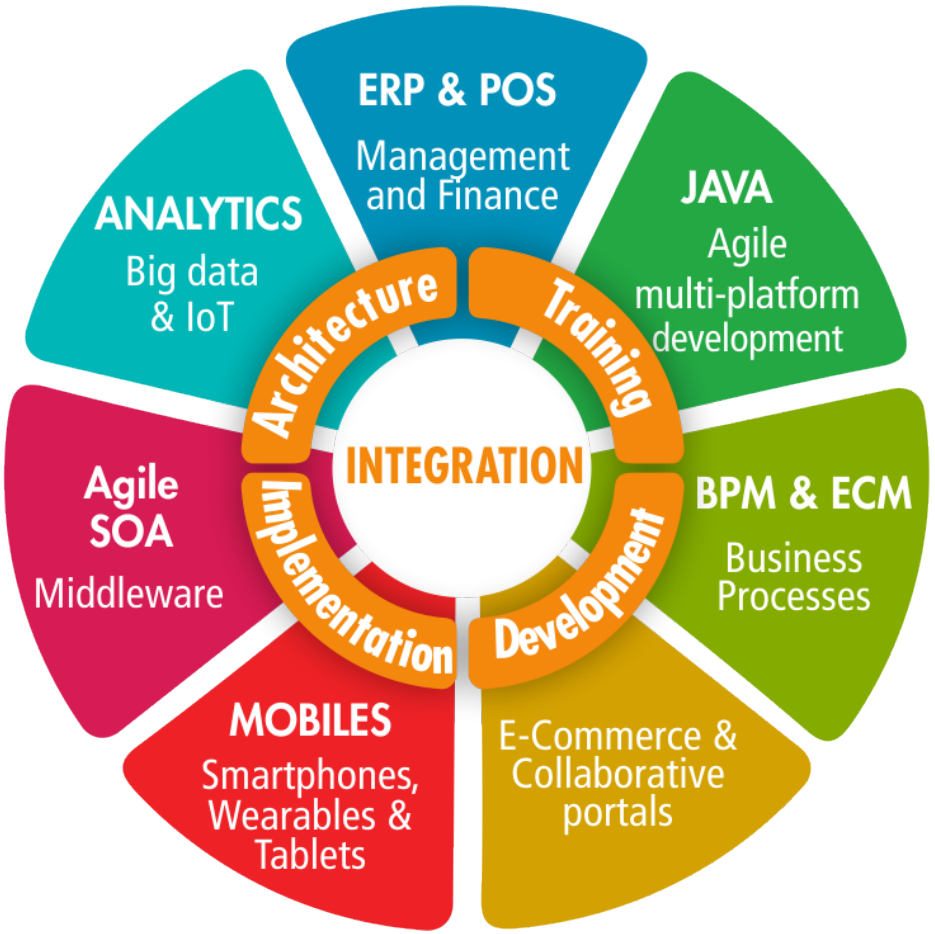
- Founded in Vancouver, Canada in 2004 and established its engineering base in Bogotá D.C,Colombia since 2009, we have executed integration projects successfully for U.K., Canada, U.S.A, Ivory Coast, Uganda, Kenia, Panamá, Ecuador and Colombia.

- We perform advanced IT integration projects using standard architectures such as Cloud Native/REST/Event oriented/SOA, EAI, OSGi ,and Java EE technologies.

IT Specialized Solutions

- Retail
- Commercial
- Supply chain & transportation
- Manufacturing
- Livestock farms & Agricultural
- Healthcare
- Online Government

Global & Standard “Building Blocks”:Horizontal Solutions



Context and Scope

- **Business Case**: ERP document/tables such as: Customer information, product, prices, invoices and much more, need to be synchronized in a selective way from/to remote locations/technologies in different geographical locations
- They require flexible options: some time one row, some times just individual changes or sometimes everything, sometimes these messages need to be used from different consumers such as; Mobile devices, analytic solutions, and other ERPs or remote systems that need to pull/push real time or asynchronous updates from/to an Idempiere ERP distros.

→ **SmartIntegrator** is a OSGi/java plugin(100% open source and free) that uses Kafka message broker/Bridge technologies plus our selective java logic to integrate those scenarios in a flexible asynchronous model for Idempiere users.

Design & Architecture

- Asynchronous Mode vs Synchronous (web services)
- Event Oriented Architecture Support
- Scalability & Performance
- Streams (memory smart objects – data layering)
- Neutral messaging (open door to many technologies)
- Multiple modes of synchronization (real time, batch)
- Smart JSON Objects: (simplified/complete depending on mandatory rules of AD fields and related fields) – checking AVRO (data quality)
- Selective scope: We can choose tables (manage by the AD)
- Open to other architecture/technologies supported by kafka

Smart Integrator

Typical Topology

Browsers

Tablets

Kafka Layers

Kafka Cluster

Selective Replication JSON Objects

Selective Replication JSON Objects

Selective Replication JSON Objects

Central Location

Idempiere Distros +SmartIntegrator

Remote App

Any Kafka Clients or Idempiere Distros

Mobile APPs - Kafka/JSON/ JavaFx

Replication (Smart replicator) (ERP to/from POS/ERP)

1. Active MQ + XML

2. RabbitMQ + XML

3. Cassandra + JSON + Reactive

Integration (Smart Integrator) (ERP to any app)

4. Includes replication plus advanced integration features with Kafka (JSON)

Future Layers

Event Oriented Architecture Support

Real time Data Layering (data Lakes)

Plus other Integration features

Full set of API's to consume ERP messages provided by Kafka:
Kafka Producer/consumer API for : Java, C++, C#, python, javascript and more

Kafka Streaming API: High performance logic to process massive amount of in-memory messages (Without saving to databases), and generate process/data transformation and orchestration

Kafka Connector API: to extend the potential integrations to other platforms

Smart Integrator

Technical & User Manual

IT Consulting

100%

Open Source

Smart Integrator

Integrate Idempiere ERP/distros from/to other applications using a selective asynchonous approach with Kafka message broker/Bridge technologies

Demo / Overview

SmartJSP

Large-scale open source software integration

IT Consulting

100%

Open Source

Smart Integrator

More information

www.smartjsp.com

IT Consulting

100%

Open Source