Implementation of E-Commerce workflows using Apache OFBiz ERP

Authors:
Sareh Ghayoomi – Narges Kasaeizadeh – Ali Khoramshahi – Vikramjit Singh – Parsa Vali
Summer Semester 2014

Supervised By:
Natalja Friesen

About the Project

Goals: Implementing three workflows (Shopping, Payment, Delivery).

Shopping ⟷ Payment ⟶ Delivery

Requirements: Server machine, Apache OFBiz ERP system.

Output: RDF format reports.

E-commerce

E-commerce or **eCommerce** stands for Electronic commerce which involves communications and doing business electronically through the internet. By using Internet and WWW services, organizations are implementing PDM, SCM and CRM[1].

ERP and Apache ofbiz

- Enterprise Resource Planning (ERP) - business management software to collect, store, manage and interpret data from many business activities: product planning, manufacturing, inventory management, shipping and payment.

- Most popular ERP systems: ERP5, Open ERP, SAP suite 1.

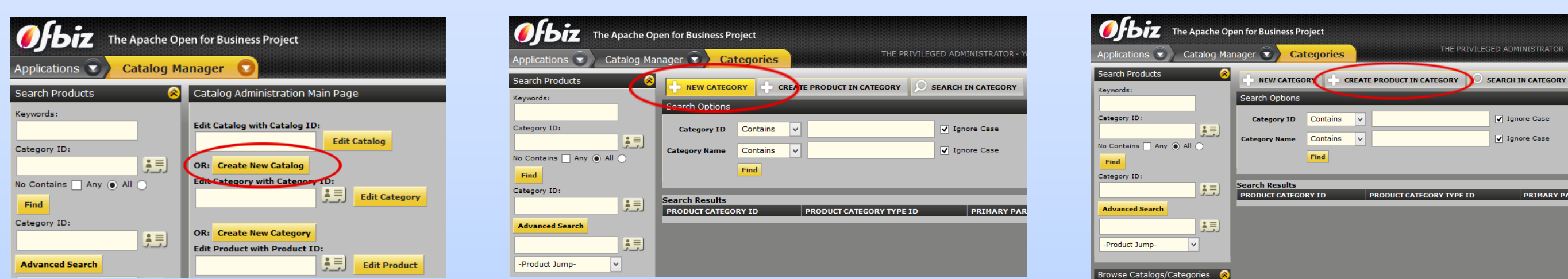- Apache OfBiz- an open source ERP system provided by Apache Software Foundation

Shopping- Workflow

Customer Side:

Catalog browsing → Sign in / Sign up → Product searching → Add/Select product → Checkout
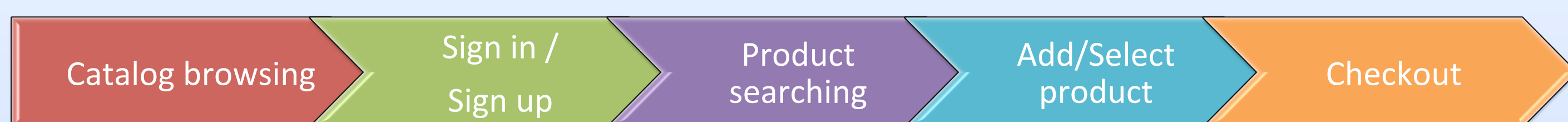
Client Side:

1- Creating Catalog   2- Creating Category   3- Creating Product

Payment Workflow

Customer Side:

Authentication check → Sign in / Sign up → Shipping method selection → Address specification → Payment method selection → Successful payment notification
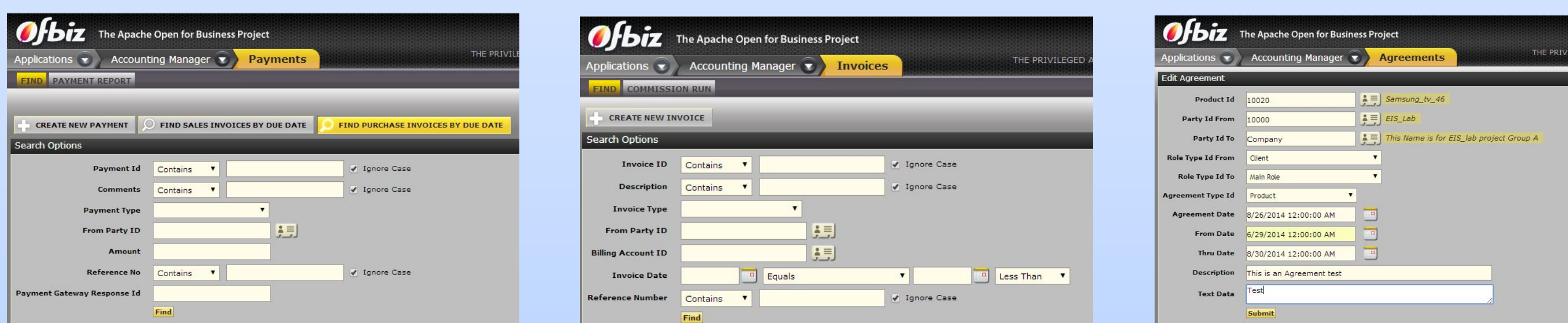
Client Side:

1- Find existing payment   2- Creating Invoices   3- Creating Agreement

Delivery Workflow

Customer Side:

Order received → Order is packed → Shipping notification → Changing Order → Shipping the changed order → Returning order → Payment return notification
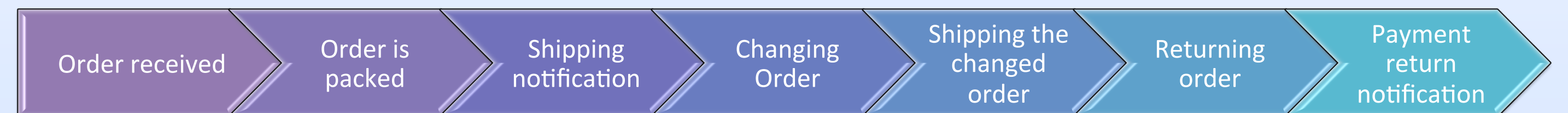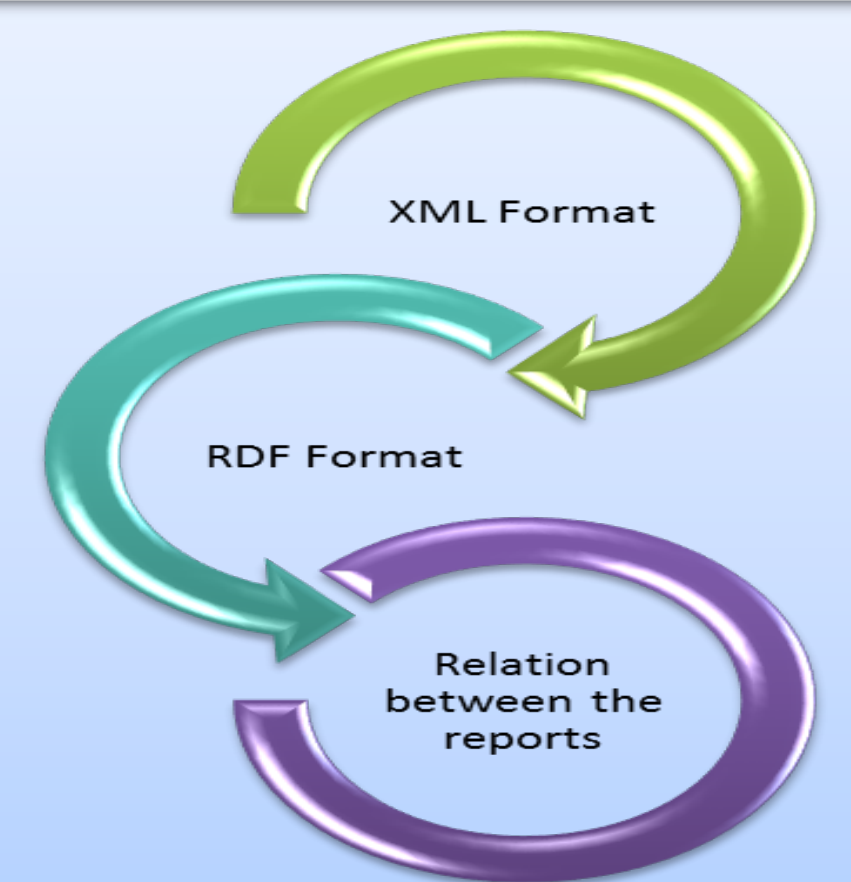
Client Side:

1- Multiple shipment   2- Finalizing order   3- Packaging order

Converting Reports to RDF format

- Finalized OFBiz's reports are generated in XML format.

- The R2RML tool (http://x2r.aut.ac.nz/x2r.jsp) is used to convert XML to RDF format.

- RDF report data can be easily integrated and linked with data about products, companies and so on.

So how to start ?

just 3 easy steps!

- Understanding ERP, E-Commerce, OFBiz and the relation between them.

- Installing Apache OFBiz and the related software.

- Learning and Understanding the Apache OfBiz and then Implementing E-Commerce on it.

Future Work

Other workflows can also be implemented which are:
- Facility and Warehouse Management
- People and Group Management
- Human resources (HR)
- Sales Force Automation
- Accounting (Agreements, Invoicing, Vendor Management, General Ledger)

Virtual Machine Description

Hostname: **vm-ofbiz**
Software installed:
Installed on: EIS3
- Ubuntu 14.04 LTS 64bit OS
- 1GB RAM
- 2 CPUs.
- jdk1.7 (/usr/local/java)
- Apache-ant-1.9.4 (/usr/share/ant)
- Apache-ofbiz-11.04.04 (/usr/lib/apache-ofbiz-11.04.04)

Local Access:
User: eis-user
Password: E1sofBiz2014

Remote Access:
Partner ID: 491395165
Password: E1sofBiz2014

Resources :
[1] : Sharma, H., Lavania, D., & Gupta, N. (2011, June 1). ERP E-BUSINESS = An emerging relationship. Retrieved September 15, 2014.

EIS Enterprise Information Systems

universität bonn