Business Intelligence Integration (Compiere <-> Pentaho) in an international Enterprise

Yves Sandfort
CEO, Founder and Shareholder of comdivision Group
Yves Sandfort

- Started in IT 1993
- Internet experience since 1994
- Financial IT solution expert since 1996
- Founded comdivision Group in 1996
- Strong development, technical and business background

- Commercial Open Source Evangelist and Consultant since 2004
  - First German Compiere ERP & CRM Trainer and Integrator
  - Pentaho Integrator since 2006
  - SugarCRM Integrator since 2009
comdivision group - Companies

- comdivision Holding Ltd.
- comdivision asset & leasing Ltd.
  - Asset Management / Leasing internal/external comdivision group
  - Retail of used / refurbished assets
- comdivision cloud Ltd.
  - Data Center / ASP Services for comdivision group and customers
- comdivision consulting GmbH
  - Consulting / Training / Development services
  - Hosting for SMB industry
- LoftAviation Software Inc. (33% shareholder)
  - ERP & CRM software for the aviation industry
Global Consulting Services
Customer: Specsavers

- **Engagement:** Open Source Consulting, Development and Training since 2005
- **Open Source Products supported by comdivision**
  - Apache Active MQ
  - Compiere ERP + CRM
  - Pentaho PDI, PRD, BI
  - MySQL DB
- **Company Information**
  - Founded 1984
  - Headquarter St Andrew’s, Guernsey
  - >= £1.2 billion (2008/9) Revenue
  - >= 26.100 Employee
Situation in 2006/2007

- Global Rollout of Compiere started 2006
  - Countries in Production today: Australia, Finland, Hong Kong, Guernsey, United Kingdom

- As of 2010 approx. 20,000 Order Documents processed globally per 24h slot

- Communication between countries provided by Apache ActiveMQ infrastructure

- Some instances have massive financial/GL records (billion lines per year)

- Compiere financial reporting is limited (functional and performance)
- Compiere reporting blocked critical functionality in production
- Global Financial Auditors openly criticized Compiere Reporting Engine
Suggested Solution

- Implementation of local and global Data Warehouse
- Implementation of a Web and Thick Client Based Report Tool
- Implementation of Business Intelligence (Analytic Platform)
- Automatic and manual data extraction (Excel, CSV, XML)

Applications planned for integration

- Pentaho PDI (former Kettle) – Data extraction and DWH population
- Pentaho PRD – Report Designer / Runtime
- Pentaho PME – Pentaho Metadata as ad hoc report design structure
- Pentaho PDS – Pentaho Design Studio action sequence and workflow design
- Mondrian – OLAP Engine for analytic processes
- MySQL – Database for Data Warehouse
Prototype

- Implement one country purely financial
  - Define Data Warehouse Structure
  - Train users and administrator on tools
  - Identify problems, solutions and strategy

- Planned Project Timeframe 3-6 months
- Project Team 6 people incl.
  - Financial Department (country / end user)
  - Business Analysts (customer IT department)
  - BI/Data Warehouse Designer & Trainer (comdivision)

- Expected outcome:
  - Users should be able to build and customize reports
  - Define user training level and demand
Prototype Results

- Data Warehouse integration with Daily Updates
- Data Structure 1.0 defined

- User acceptance
  - Production System performance improvements
  - User/Financial Departments not capable/trainable to generate complex Reports

- Biggest challenges
  - Hard to get definitions from financial users
  - Users love Microsoft Excel and don’t want to move
  - Bad history (direct DB access to legacy ERP) hard to remove
Roll Out Plan

- Data Warehouse integration with Daily Updates
- Data Structure 1.0

- User Training
  - Usage of Pentaho BI/Report Tool via Web UI
  - Define additional data demand / reports

- Resources
  - Financial/BI Trainer: 4 days / country
  - comdivision technical team: 2 days / country

- Roll Out finished end 2008
Phase 2 / Next Steps

- Data Warehouse Daily Update is too long
  - Financial and Material information needs to be near real time
  - Summary / Cache infrastructure needed

- Web UI
  - Users accept reports, but no way to replace Excel
  - Data Export via Web UI enforced

- BI/Analytic Roll Out
  - MetaData structure for BI and Ad Hoc Report Generator

- Phase 2 rolled out by end 2009
Phase 3 / Central Consolidation (Prototype phase)

- Central/HQ Data Warehouse
  - Summary Level of Country and Region
  - Financial and Stock Data
  - Updated Daily

- Regional Data Warehouse (i.e. Nordic, AsiaPac)
  - Summary Level of Country
  - Financial and Stock Data
  - Updated Daily

- Challenges
  - Big Data Volume to replicate
  - Time Window difficulties (AsiaPac vs. Europe)
  - Different COA/Currency scenario
Current Situation

- Data Warehouse per Country / Compiere Instance in production
- Data Warehouse updated near real time (max delay 2 mins)
- Pentaho BI / Report Server deployed in each country
- Report Design / Maintenance run central
  - Countries can sponsor reports
  - Reports are deployed globally
- Phase 3 to be completed in 2010/2011
Thank you

- Yves Sandfort
- EMail: y.sandfort@comdivision.com
- Phone: +49 251 703839 0 (EMEA), +1 801 618 2819 (USA)
- Web: http://www.comdivision.com

- Twitter: http://twitter.com/yvessandfort