HITACHI
Inspire the Next

Partner Workshop

Secondhand Lens

v8.0

Introduction

Providing business analytics solutions in today's environment of big and diverse data can be a challenge. Technologies are evolving every day and solutions require computing competencies in addition to traditional DW/BI skills.

Hitachi Vantara's Pentaho platform provides an ideal solution for companies looking to expand their analytics capabilities to include these new big data types and sources, and gain from our experts who have successfully deployed many production solutions for financial, healthcare, advertising, publishing, and technology industries.

The Partner Workshop is designed to guide Hitachi Vantara Partners in acquiring requisite knowledge and skills in implementing a Pentaho Solution following Professional Services VANTAGE guidelines.

Audience

To complete the Workshop, each of the Partner organizations will require a person with the following role / activities:

Role	Activities
Solution Architect	• Data Discovery:
	• Data Warehouse Techniques: Slowly Changing Dimensions (CDC)
	• Data Modelling: Using MySQL Workbench or ER Tool
	• GitHub: Repository for Jb and ktr
	• SQL: scripts to create / join tables / schemas
	• Unix: Archive install of Pentaho server
ETL Developer	• Data Discovery:
	• Data Warehouse Techniques: Slowly Changing Dimensions (CDC)
	• Pentaho Data Integration: ETL workflows
	• GitHub: Repository for Jb and ktr
	• Rapid Prototyping: Data Source Wizard or DET
	• SQL: scripts to create / join tables / schemas
Analytics Developer	• Reporting Requirements:
	• Rapid Prototyping: Data Source Wizard or DET
	• SQL: Join tables
	• Pentaho Business Analytics Client Tools

Lab Environment

Each team member will have their own server. The servers will be networked and have access to the internet.

The Pentaho server is hardware-independent and runs on server-class computers that comply with these specifications for minimum hardware and required operating systems:

Pentaho Server

Processor: 4 cores
RAM: 16 GB
Disk Space: 500 GB
Networked
Internet Access
Ubuntu Server 16.04 LTS
Pentaho Server
Repository
MySQL CE 5.7

Pentaho Clients 1 to 3

Processor: 4 cores
RAM: 16 GB
Disk Space: 500 GB
Networked
Internet Access
Microsoft Windows 10
Pentaho Aggregation Designer
Pentaho Data Integration
Pentaho Metadata Editor
Pentaho Report Designer
Pentaho Schema Workbench

HITACHI
Inspire the Next

Partner Workshop: Overview & Installation

Day	Topic	
1	Introduction	• Agenda • VANTAGE methodology • Lab Environment

	Story	• Secondhand Lens
		• Requirements:
		  ○ Non-functional – GitHub Repository
		  Database Management Tool
		  MySQL - Relational
		  MySQL - Star
		  ○ Business – Analysis Reports
		  Interactive Reports
		  Report Designer
		  Dashboard

	Installation & Configuration	• Pentaho Business Analytics Suite v8.0
		  ○ Archive Installation
		  ○ Client Tools (Wizard)
		  ○ Security (Roles/Users)

HALF DAY BREAK AND CHECKPOINT		
	Solution Architecture	• Assess customer's requirements and design the solution architecture

Deliverables		• Working Pentaho Servers on windows and Linux servers
		• Working client and development tools
		  ○ Git clients
		  ○ DB Explorers
		  ○ Etc.

END OF DAY CHECKPOINT		

Partner Workshop: Solution Design, Models / Schemas

Day		Milestones
2	Planning	• Team definition • Data Discovery • Solution Design Template review • User stories and task list template review
	Discover	• Data Discovery • Discover Infrastructure • Setup local environments + Git setup
HALF DAY BREAK AND CHECKPOINT		
	Design	• Design the schemas • Design dim and facts • Define reports • Define implementation tasks • Solution Design Document
Deliverables		• Solution Design Document
END OF DAY CHECKPOINT		

Partner Workshop: ETL Scripts, Metadata Models & Schemas, Reports

Day		Milestones
3	Execute	• Create scripts • Implement ETLs to create the DWH and Datamarts and populate them • Create Metadata Model • Create Mondrian Schema • Create PRD reports
HALF DAY BREAK AND CHECKPOINT		

	Execute	• Continue to work on
		  ○ Metadata Model
		  ○ Mondrian Schema
		  ○ PRD Reports
		  ○ Analyzer Reports
		  ○ Interactive Reports
		  ○ Dashboards

Deliverables		• Demo the application
END OF DAY CHECKPOINT		

Partner Workshop: Deployment, Testing

Day		Milestones
4	Execute	• Test jobs and transformations • Schedule jobs • Test reports • Deploy end-2-end
	HALF DAY BREAK AND CHECKPOINT	
	Enable	• Document Deployment • Prepare Presentation to client • Clean up
	END OF DAY CHECKPOINT	

Partner Workshop: Presentations

Day		Milestones
5	Enable	• Present to client • Demo • Deploy to production server

HITACHI
Inspire the Next

Below is the checklist / deliverables that need to be completed by the end of each session.

Day	Topics	Deliverables		
		Architect	**ETL Developer**	**Analyst**
1	Introduction Story			
		Setup individual server Setup Git client DB Explorer Client tools	Setup individual server Setup Git client DB Explorer Client tools	Setup individual server Setup Git client DB Explorer Client tools
	Installation and Configuration		Setup Development env.	
	Solution Architecture	Start the Design of the solution		
2	Planning	Define Team members	Task list	Task list PRD Reports Metadata Model
	Discover	Solution Design Document	Create ETLs for DWH and Datamart	Mondrian Model
	Design	Epics and Stories		
3	Execute	Solution Design Document		PRD Reports Metadata Model Mondrian Model
4	Execute	Test	Create ETLs for DWH and Datamart Deployment scripts schedule jobs	Dashboard
	Enable	Prepare Presentation	Clean up	Clean up
5	Enable	Present Solution	Deploy to production	Deploy to production

HITACHI
Inspire the Next

Story

Secondhand Lens (SL) have a number of Camera stores throughout the United Kingdom and United States, which primarily sell secondhand camera lenses. Along with their store sales, they also have a website which customers can purchase these lenses online.

Up to now, SL's business analysts and management team had to reach out to the I.T operations team to run queries on the transactional database to generate basic reports. Managers wish to updated in a timely manner with operational and financial reports.

May 08, 2018 @ 02:59

Lens Channel Sales by Customer 2017

Name: Mr Diego Sanchez

Name	Sales Channel	Date	Sales
Asahi Optical Co. Super Takumar 50mm f/1.4-16.0	store	05-19-2017	397
Asahi Optical Co. Super Takumar 50mm f/1.4-16.0	store	06-07-2017	482
Asahi Optical Co. Super Takumar 50mm f/1.4-16.0	store	02-26-2017	187
Asahi Optical Co. Super-Multi-Coated Takumar 20mm f/4.5-16.0	store	06-17-2017	440
Asahi Optical Co. Super-Multi-Coated Takumar 24mm f/3.5-16.0	store	02-07-2017	371
Asahi Optical Co. Takumar 35mm f/4.0-22.0	store	04-01-2017	361
KMZ or BeLOMO MIR-1 37mm f/2.8-16.0	online	06-22-2017	462
Accura Diamatic 135mm f/2.8	online	05-30-2017	313
Asahi Optical Co. Super-Takumar 24mm f/3.5-16.0	online	06-24-2017	430
Albinar Super 85-205mm f/3.8	online	03-30-2017	146
		Total:	**3,589**

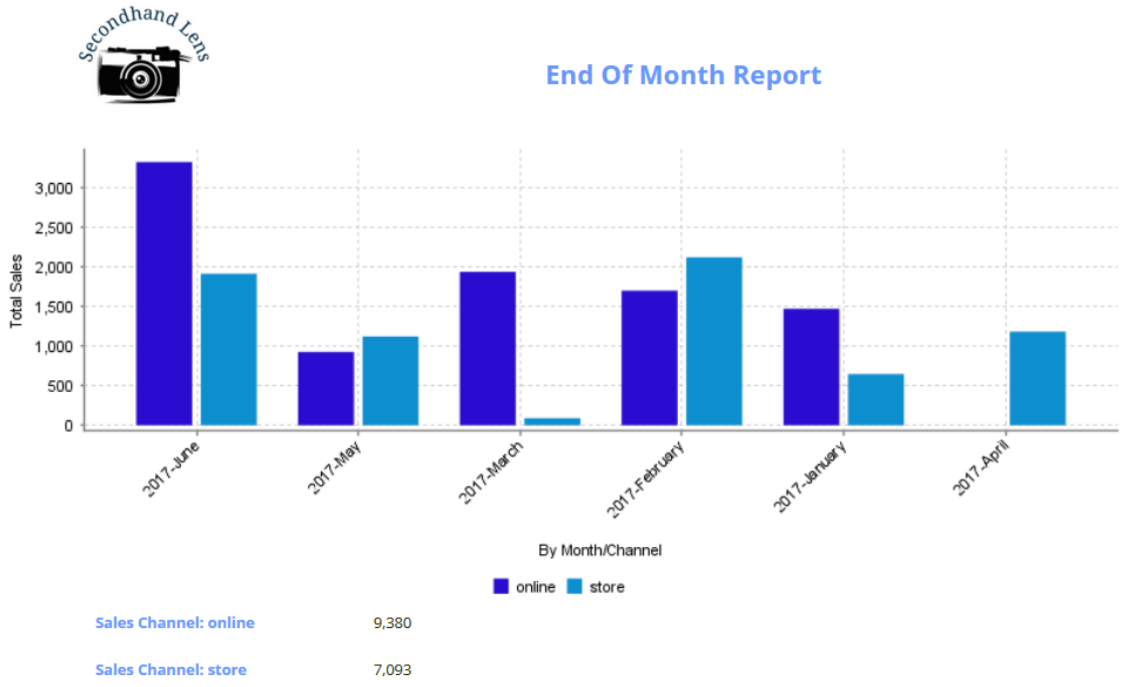
Data Analysts need to be empowered to 'slice and dice' the data on an ad-hoc basis, i.e. by time, geography, or lens type.

				Year					
				Quarter					
				Month Long					
				2017					
				1			2		
				February	January	March	April	June	May
Customer Name	Lens Name	Sales Ch...	Store Name	Total Sales	Total Sales	Total Sales	Total Sales	Total Sales	Total Sales
Mr Diego Sanchez	Accura Diamatic 135mm f/2.8	online	Online	-	-	-	-	-	313
	Albinar	store	Chelsea Photos	-	-	230	-	-	-
	Albinar MC TeLe 135mm f/2.8	store	Pro Cameras	-	105	-	-	-	-
	Albinar Super 85-205mm f/3.8	online	Online	-	-	146	-	-	-
	Asahi Optical Co. Auto-Takumar 3...	store	Loch Pictures	128	-	-	-	-	-
			Southern Beauty	-	464	-	-	-	-
	Asahi Optical Co. Fisheye-Takumar...	store	Southern Beauty	211	-	-	-	-	-
	Asahi Optical Co. Super Takumar ...	store	Mile High Photos	187	-	-	-	-	-
			Professional Photographers 2	-	-	-	-	-	397
			Rakesh Lenses	-	-	-	-	482	-
	Asahi Optical Co. Super-Multi-Coa...	store	High Tech Cameras	-	-	-	-	440	-
	Asahi Optical Co. Super-Multi-Coa...	store	Best Pictures	-	466	-	-	-	-
			Happy Pictures	371	-	-	-	-	-
	Asahi Optical Co. Super-Takumar ...	online	Online	-	-	-	-	430	-
	Asahi Optical Co. Takumar 35mm ...	store	Chelsea Photos	-	-	-	361	-	-
	KMZ or BeLOMO MIR-1 37mm f/2....	online	Online	-	-	-	-	462	-
		store	York Cameras	-	-	271	-	-	-
	Vega-1 50mm f/2.8	store	Happy Pictures	-	-	396	-	-	-
Mr Diego Sanchez Total				**897**	**1,035**	**1,043**	**361**	**1,814**	**710**

A new approach is required to access their data, and Pentaho Analytics Suite is a perfect solution. The company has provided the following high-level requirements:

- Users login to a portal and execute / create reports.
- Data Analysts require an OLAP solution, so they can measure their sales:
    - By sales channel
    - By store
    - By time
    - By city
    - By product
- Business needs an ad hoc way to generate reports on transaction details.

- End of month reports should be generated as pdf to be distributed to the management team for monthly strategic meetings, and investors.



- Sales Manager would like to have a high-level view of the overall sales.

Phase I

- SL can use any security scheme that comes with the product, but all users must have accounts with proper roles and permissions. For future phases, the platform needs to be integrated with Active Directory.
- SL's IT environment, has a development and a production environment. Code or artifacts need to be promoted from a source control repository.
- The platform will not have direct network access to the production database. Data file extracts can be placed in any location for the platform to process them.
- The data files are extracted several times during day to keep the reporting data as up to date as possible.
- Development and production environments are on virtual servers running Ubuntu Linux.

Phase II

- SL would like to extend the application to support reports for store managers such that they can only see the performance of their own stores.
- SL is in the process of implementing a portal for their employees, store personnel and customers which goes live next year. They would like to know how they can leverage the Pentaho platform for reporting and analytics within their web application.