



FURY BUSINESS INTELLIGENCE



Presented by: Don Slaunwhite

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OVERVIEW

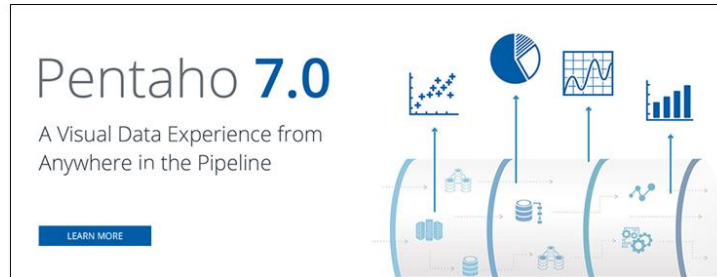
- Architecture / Technology
- ETL Design
- Data Warehouse Design
- Reporting and Analytics
- Testing and Change Management Processes

PENTAHO OPEN SOURCE

Pentaho 7.0

A Visual Data Experience from Anywhere in the Pipeline

[LEARN MORE](#)



Data Integration - Kettle

Data Integration (or Kettle) delivers powerful Extraction, Transformation, and Loading (ETL) capabilities, using a groundbreaking, metadata-driven approach.

[DOWNLOAD SECTION](#)



Pentaho Reporting

Suite of Open Source reporting tools that enables the creation of relational and analytical reports from a wide range of data sources.

[DOWNLOAD SECTION](#)



Mondrian

Online Analytical Processing server (OLAP). Allows business users to analyze large and complex amounts of data in real-time.

[DOWNLOAD SECTION](#)



Pentaho Marketplace

Extend the capabilities of your Pentaho platform with this simple way to install and maintain your plugins and language packs.

[VISIT MARKETPLACE WEBSITE](#)



Data Mining - Weka

Comprehensive set of tools for machine learning and data mining to enhance your insights through predictive analytics.


[DOWNLOAD SECTION](#)



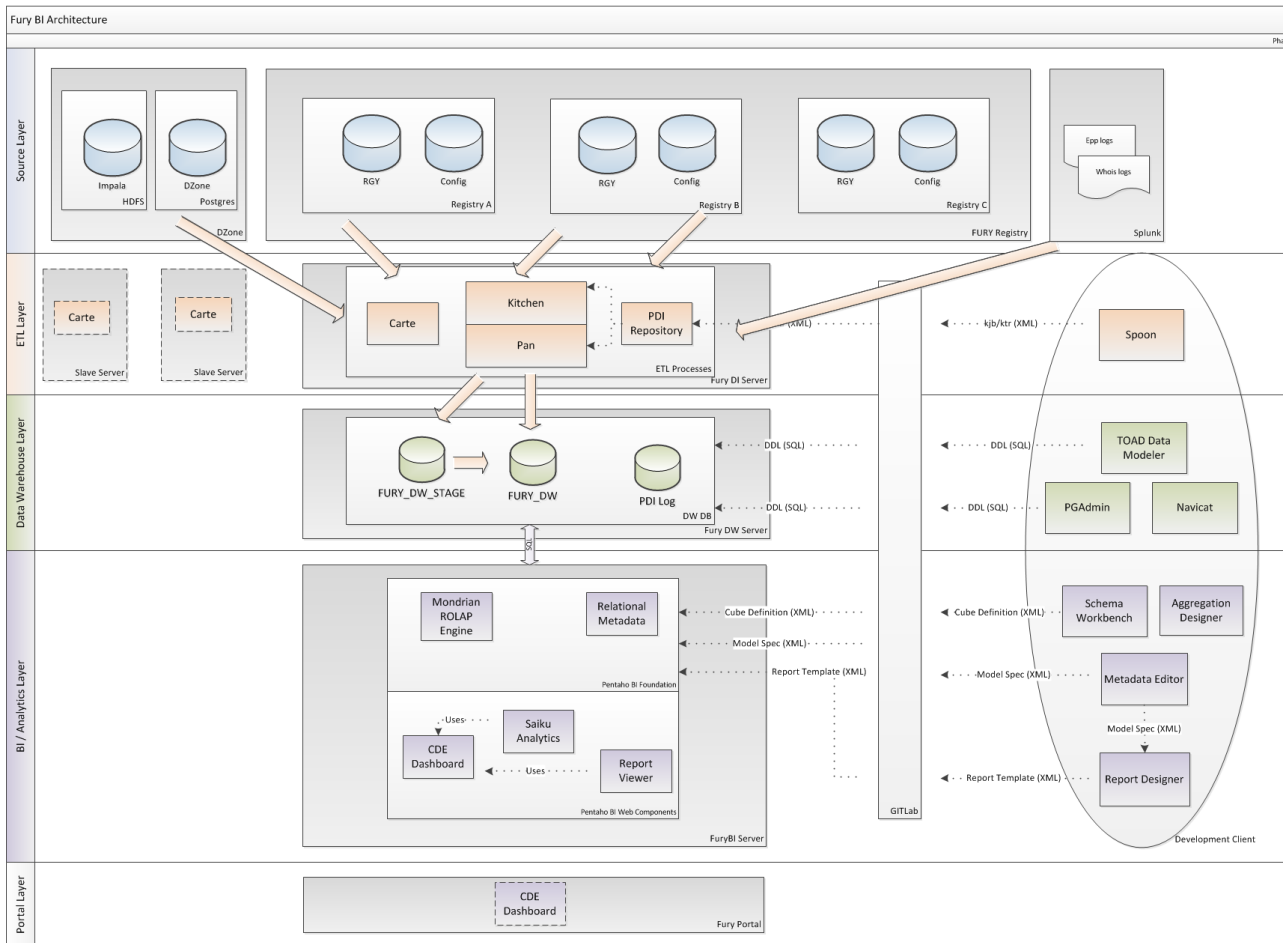
CTools

CTools are a set of tools and components created to help you build Custom Dashboards on top of Pentaho. There are specific CTools for different purposes. Check the full list below for more info.

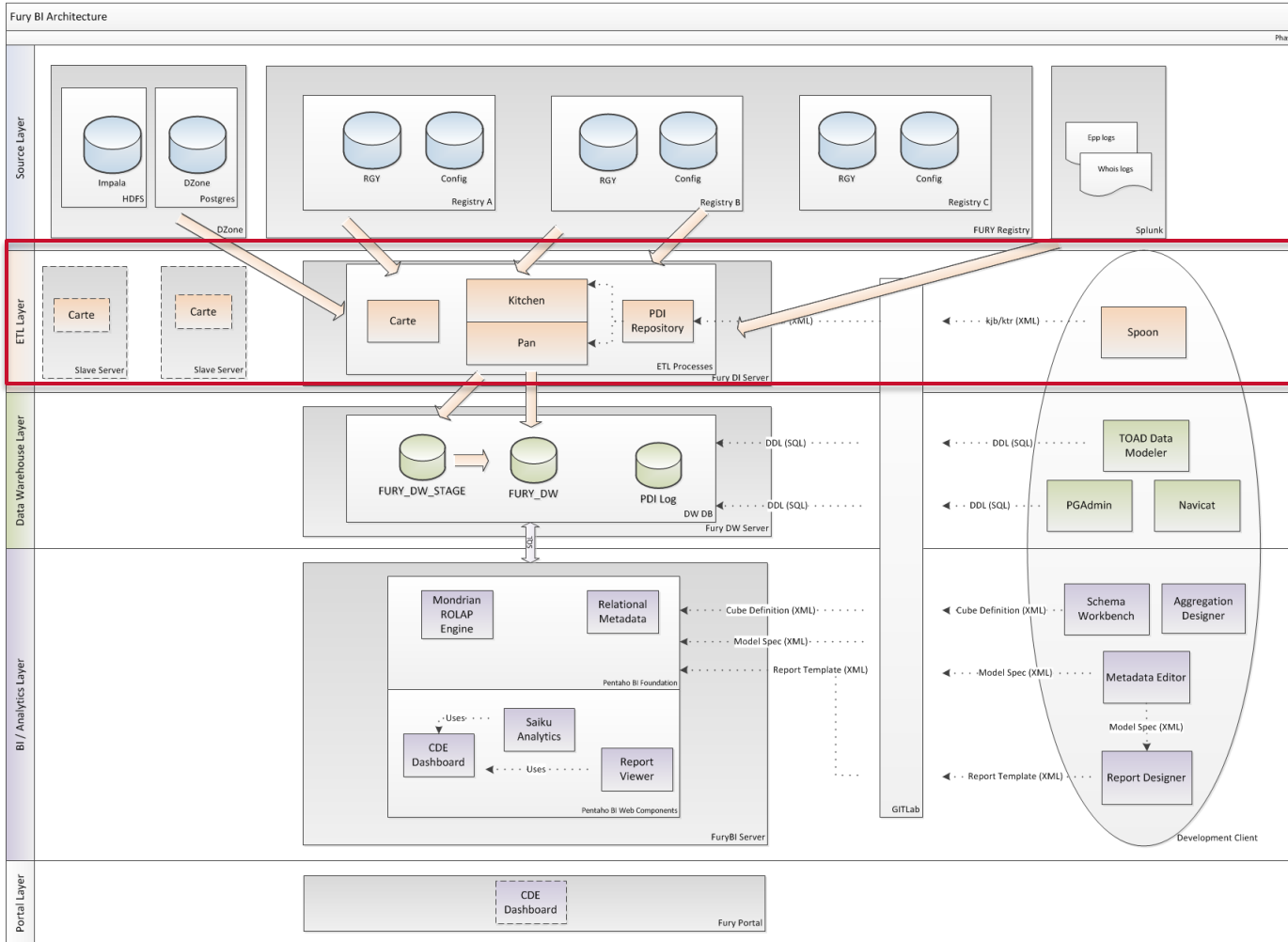
[VIEW DEMOS](#)



FURY BI ARCHITECTURE

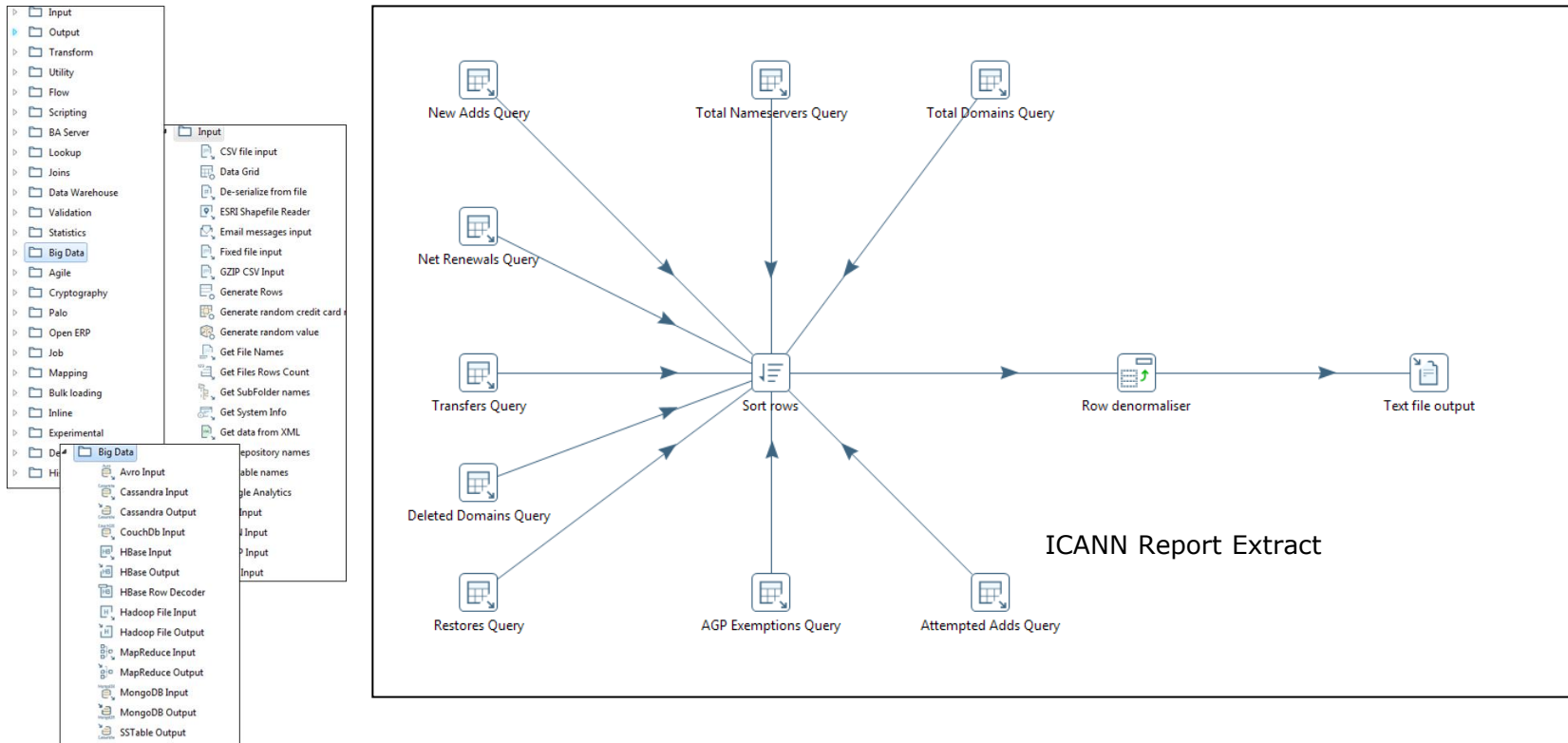


ETL



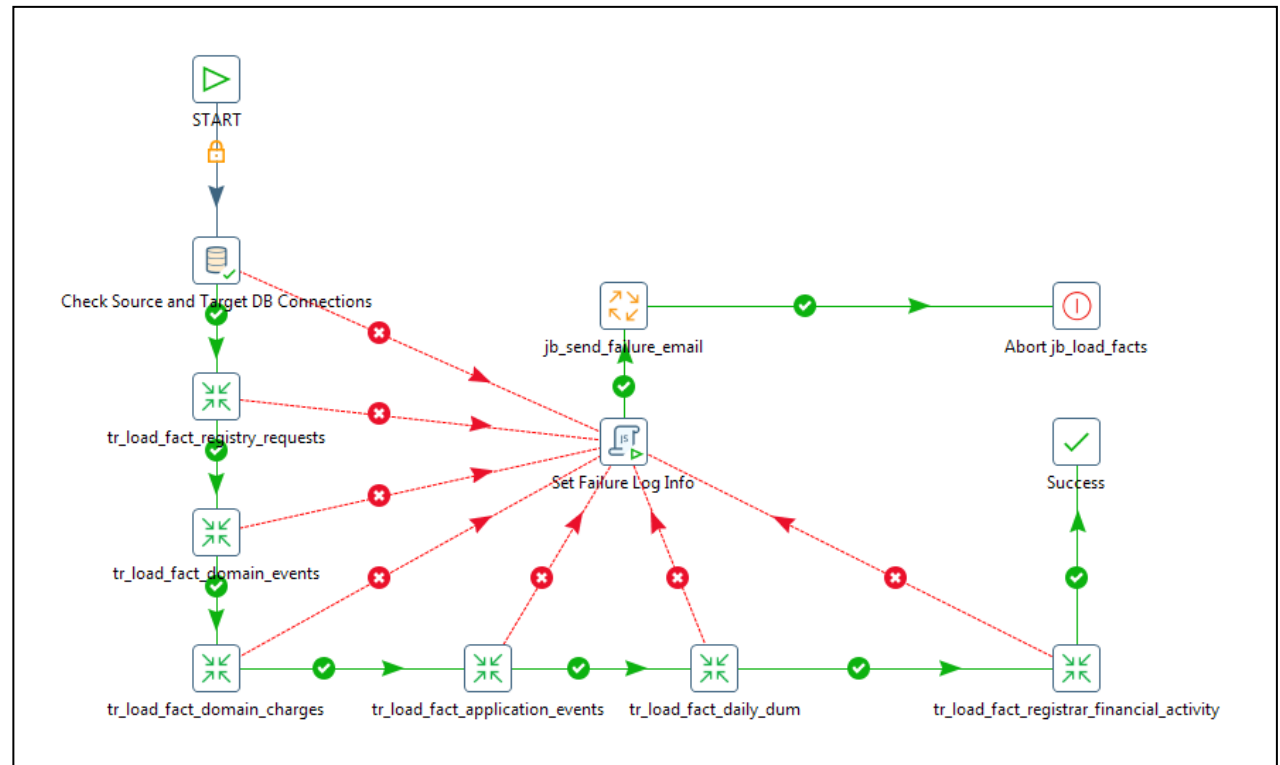
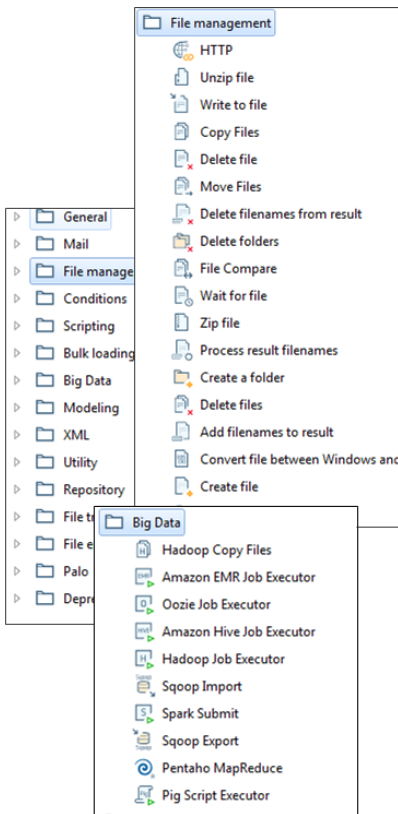
PENTAHO DATA INTEGRATION

- Spoon – IDE for creating Transformations (row level data manipulation steps)



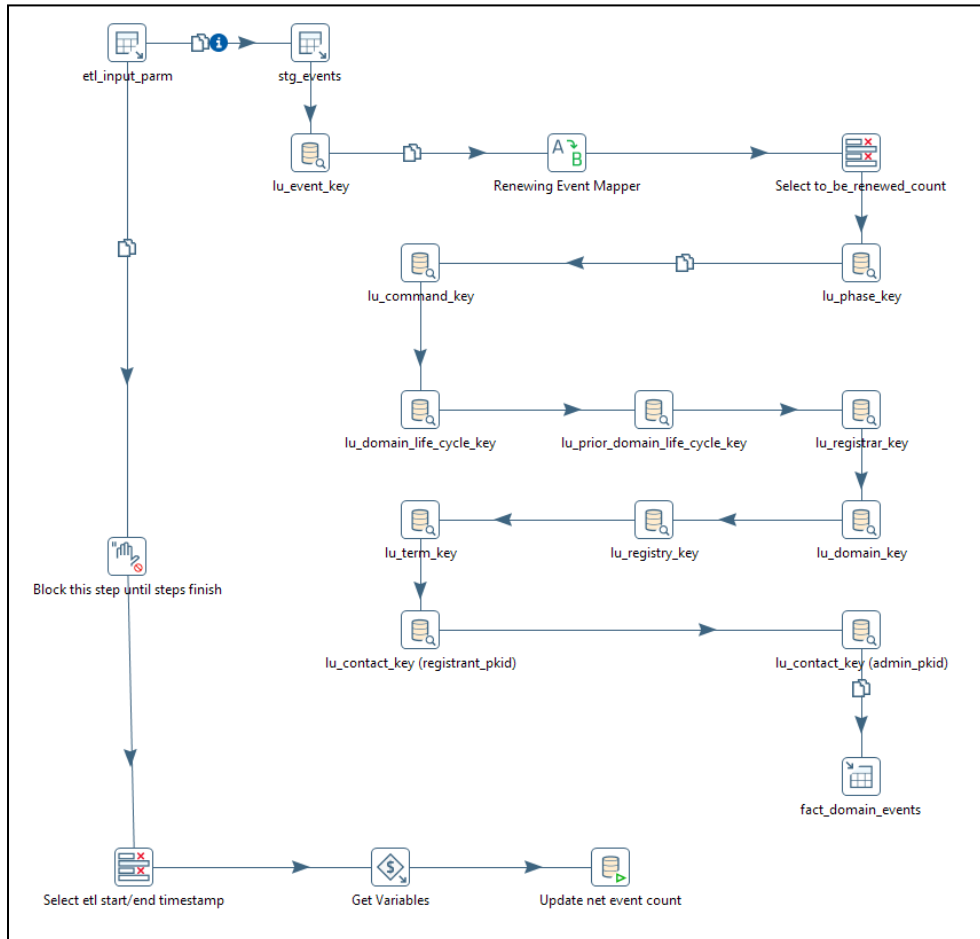
PENTAHO DATA INTEGRATION

- Spoon – IDE for creating Jobs (ETL workflow)



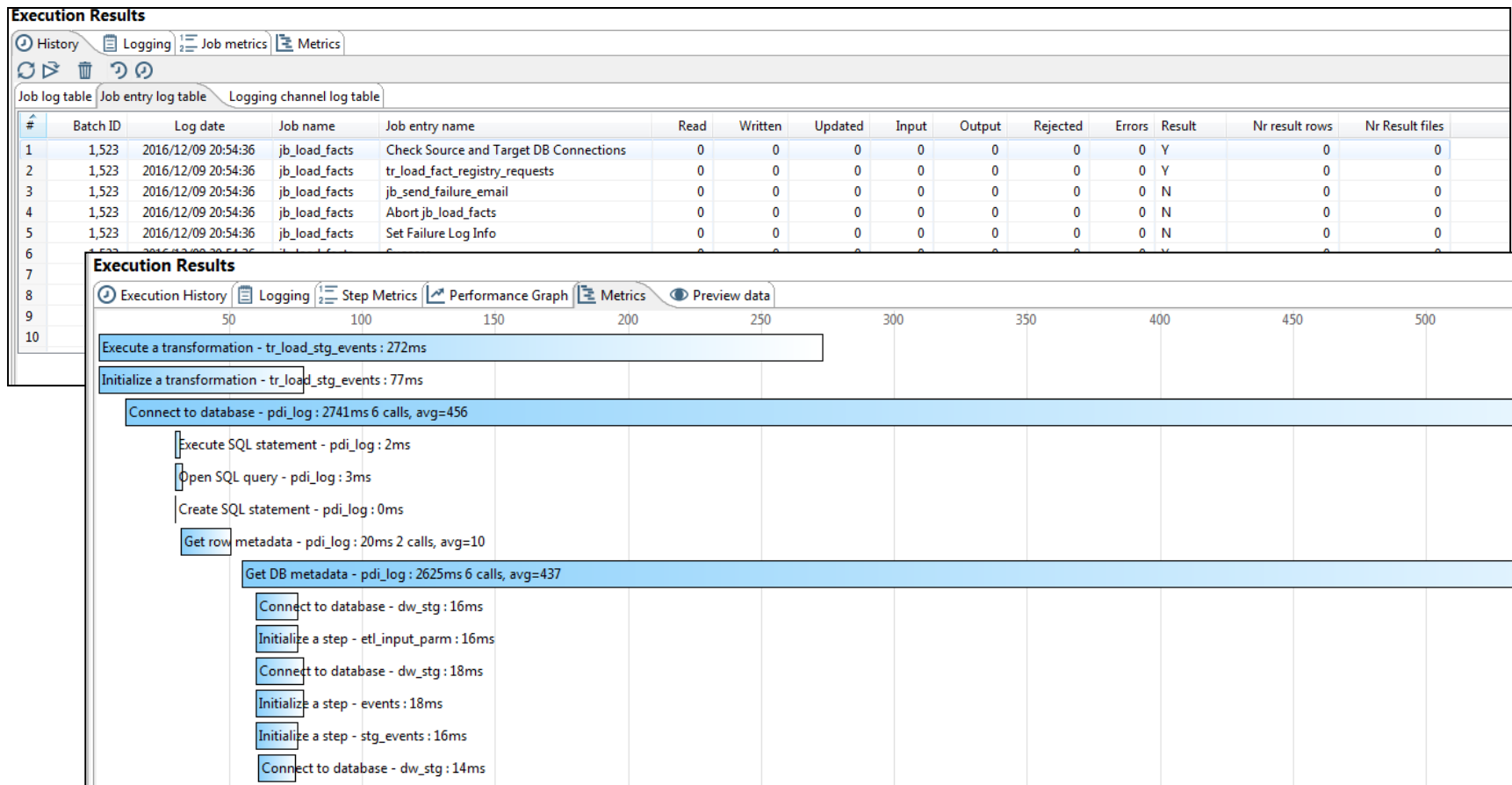
PENTAHO DATA INTEGRATION

- Spoon – sample transformation

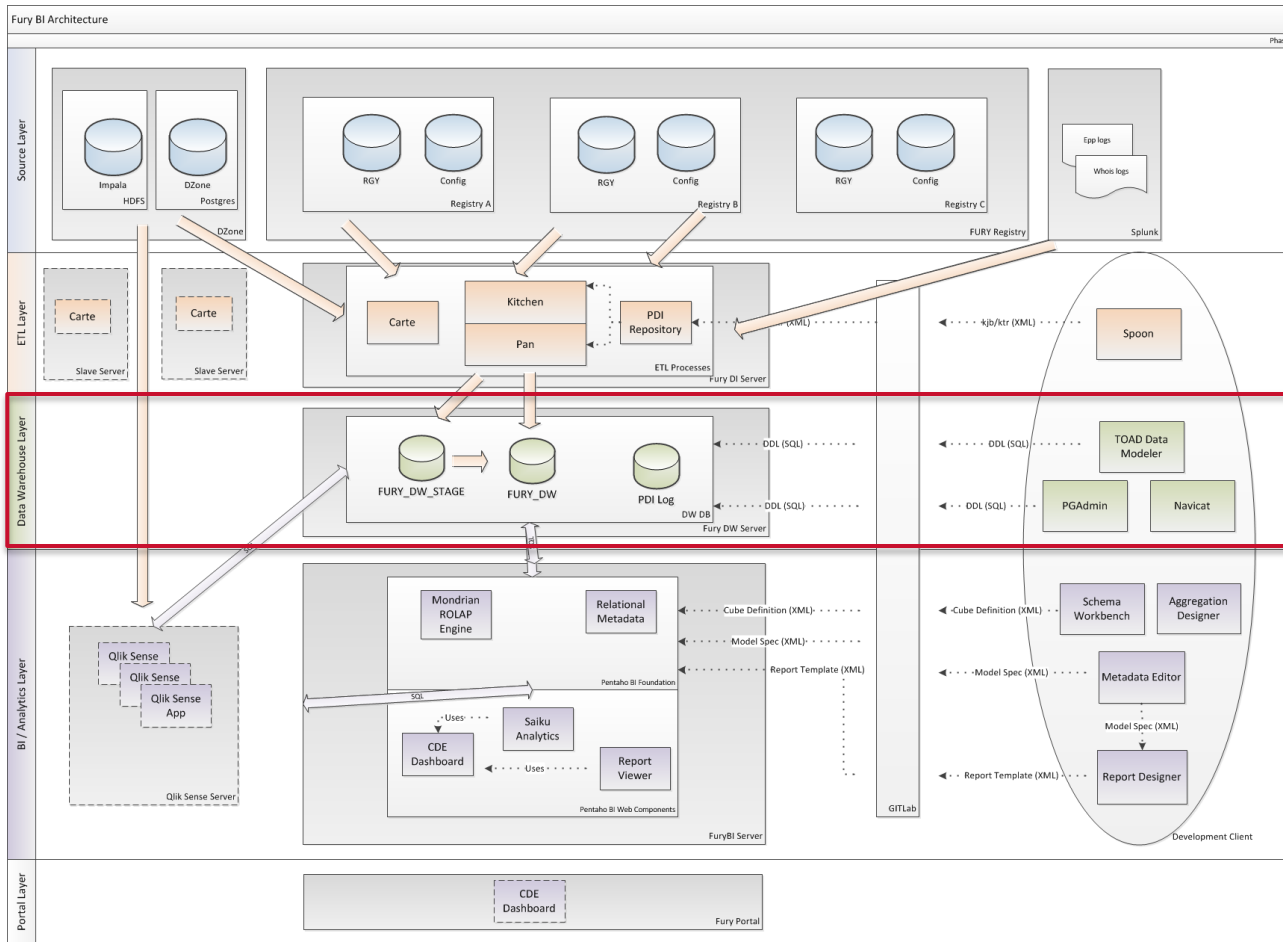


PENTAHO DATA INTEGRATION

- Detailed execution logging with Audit schema



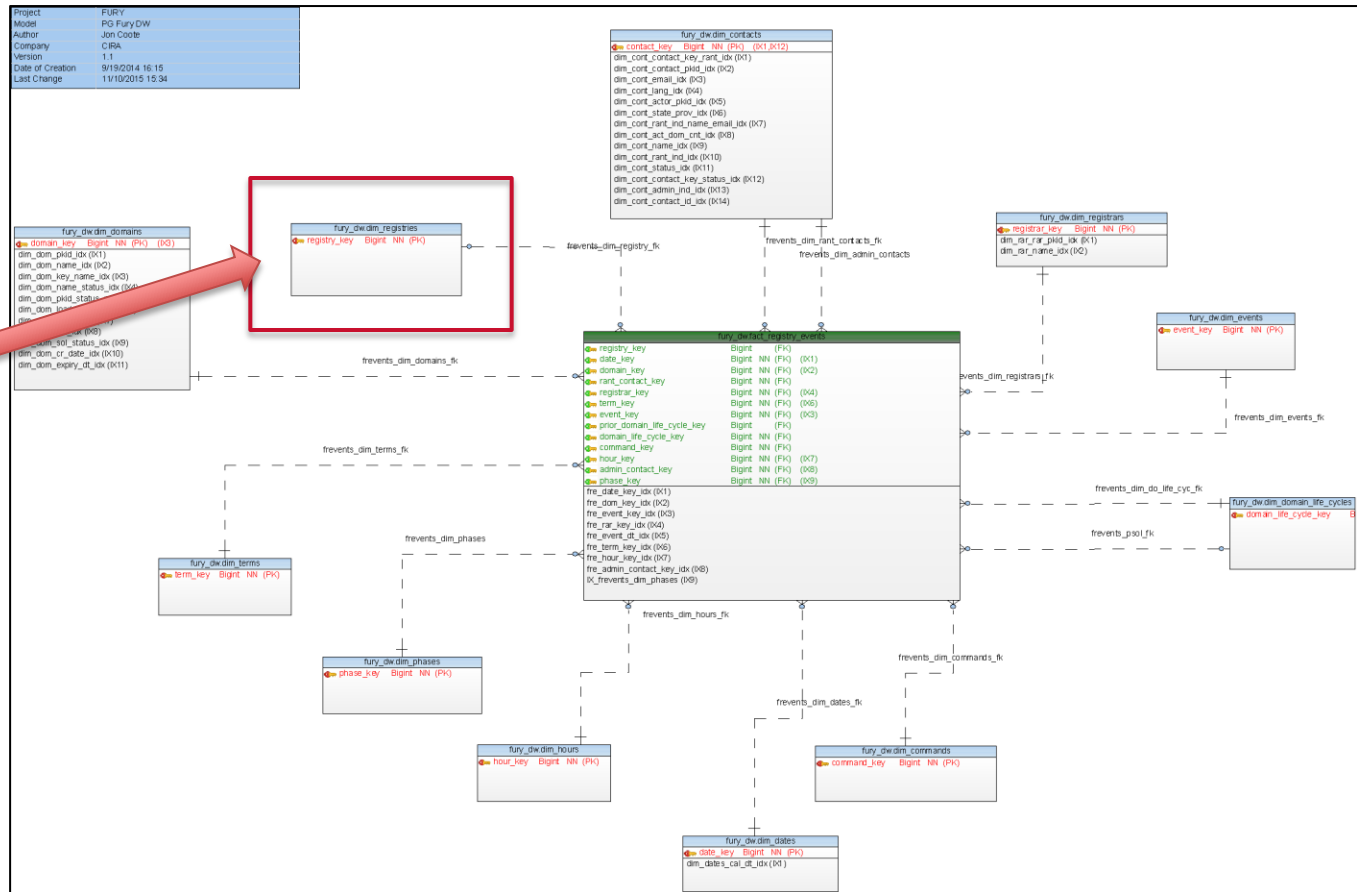
DATA WAREHOUSE



STAR SCHEMA – DIMENSIONAL MODEL

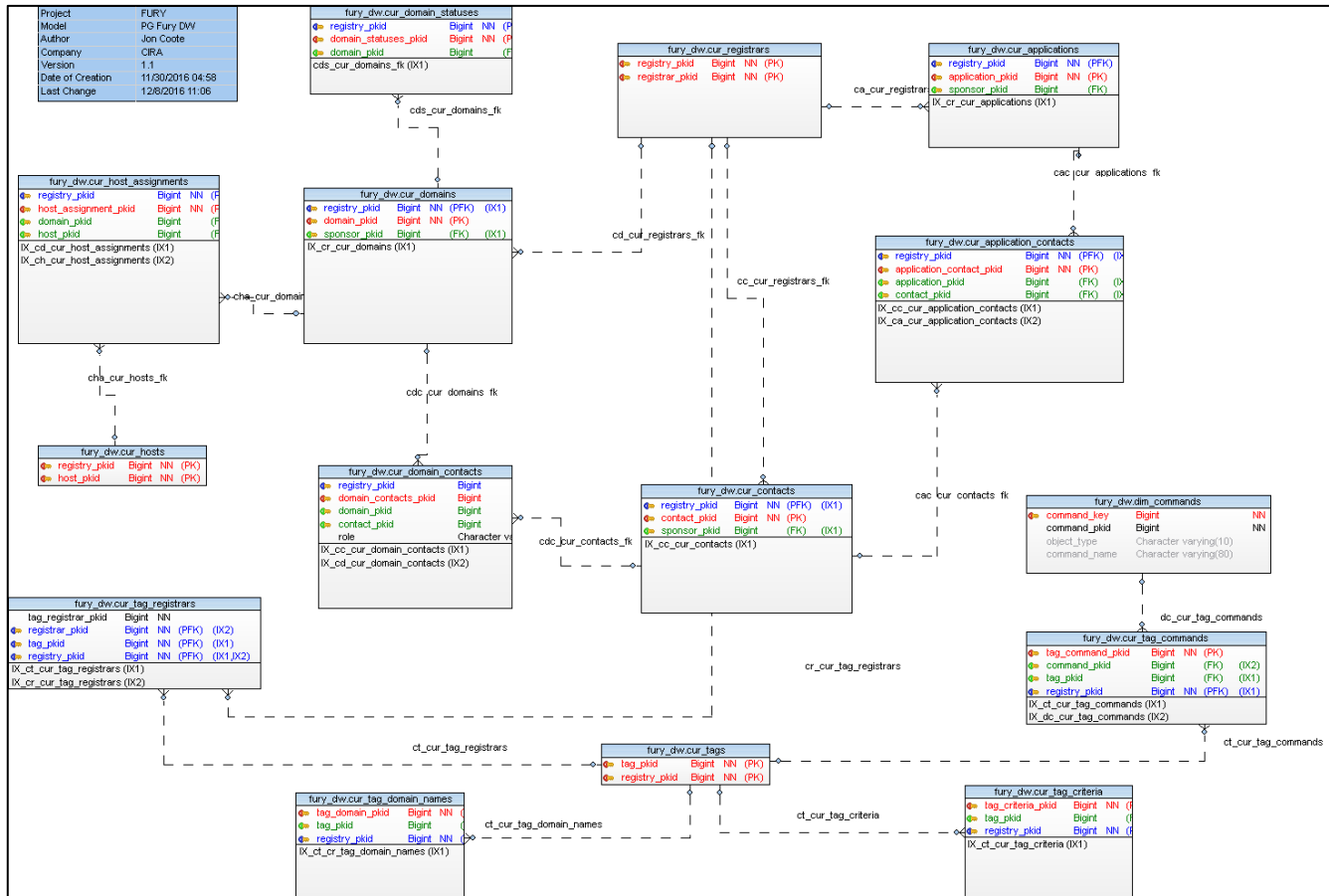
- Foundation for Analytic Queries through Analytic BI Tools (Saiku / Report Designer)

Registry Dimension
(Multi-Tenancy)

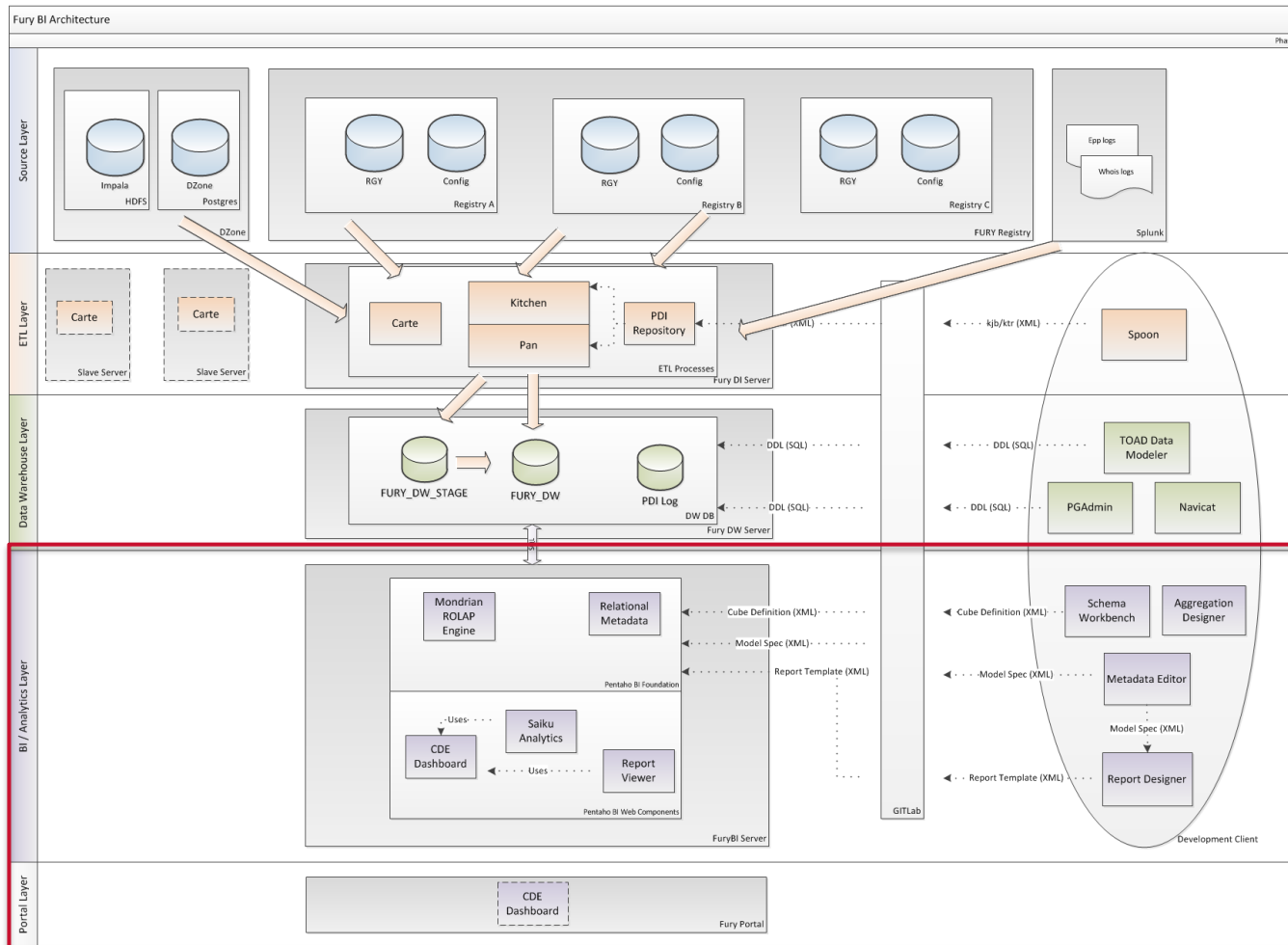


RELATIONAL MODEL

- Used for detail querying though BI Tools

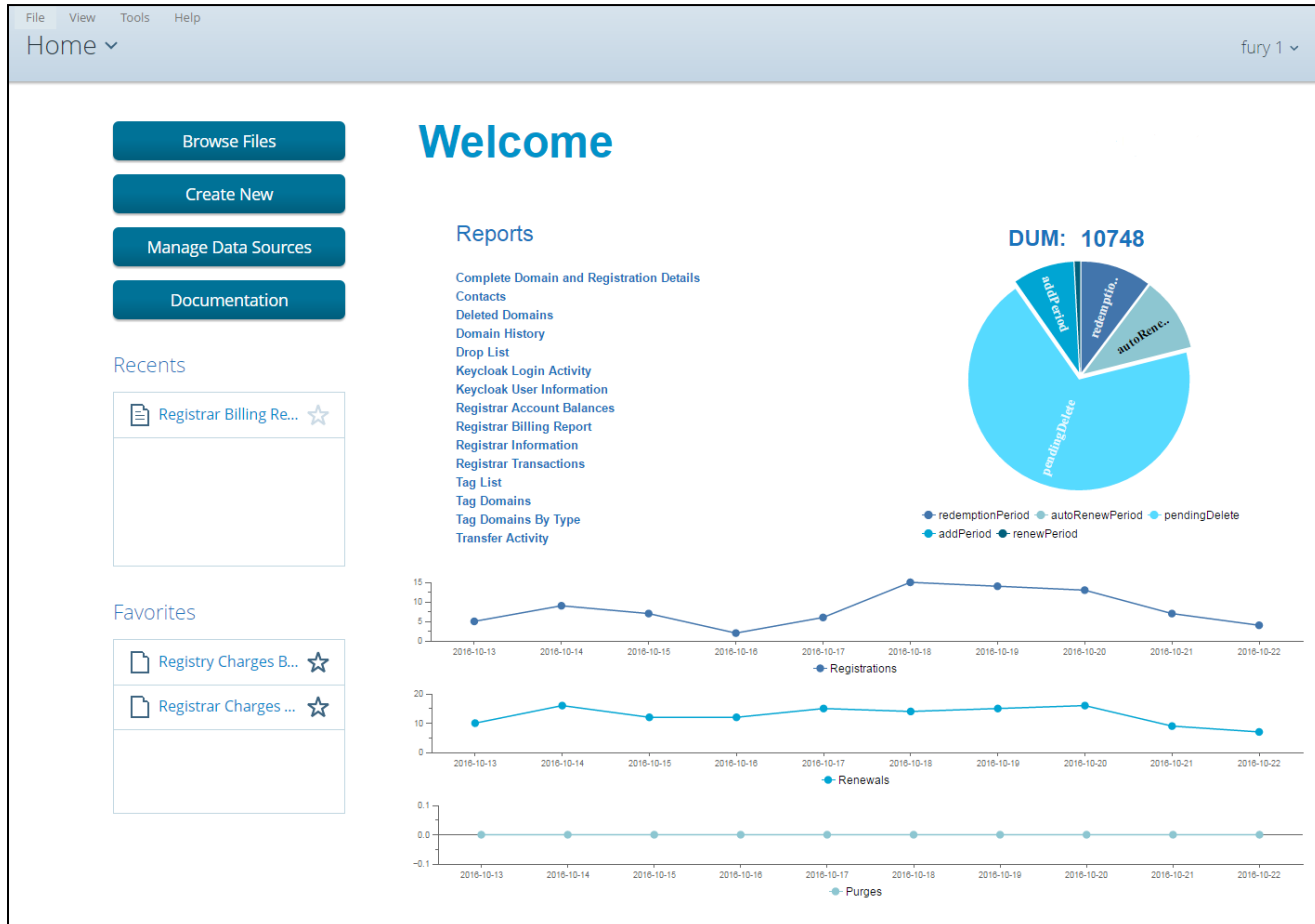


REPORTING AND ANALYTICS



REPORTING AND ANALYTICS

- Pentaho BA Server - Open Source Community Edition



REPORTING AND ANALYTICS

- Report Designer- Desktop Report Creation Tool

The screenshot displays the Report Designer software interface. The main workspace shows a report layout for "Whois Search Details". The report includes a page header with the ".FURY" logo and a table with columns: Domain Name, Name, Start Date, End Date, Domain Found, Date, Text, and IPV1. Below the table are three charts: a Line Chart, a Pie Chart, and a Bar Chart. The Line Chart shows values for three series (First, Second, Third) across five categories. The Pie Chart is divided into three parts (Part 1, Part 2, Part 3). The Bar Chart shows values for three series across five categories. On the right side, the Structure pane shows a hierarchical tree of report elements, including Page Header, Report Header, Group, Details Body, and Report Footer.

REPORTING AND ANALYTICS

- Report Designer- Desktop Reporting Tool

.FURY Registrar Billing Report
Transactions between 2015-11-30 and 2017-03-06

Registrar - 88001

Event	Term
Registration	1 Year
Registration Cancellation	1 Year

Registrar - 88001x

Event	Term
Registration	1 Year
Registration Cancellation	1 Year

Registrar - 88601

Event	Term
Registration	1 Year

Report Run: 2017-03-07 12:09:04 EST 1 / 20

Drill Through



.FURY Registrar Transaction Report
Transactions between 2015-11-29 and 2017-03-05

Registrar - 88603

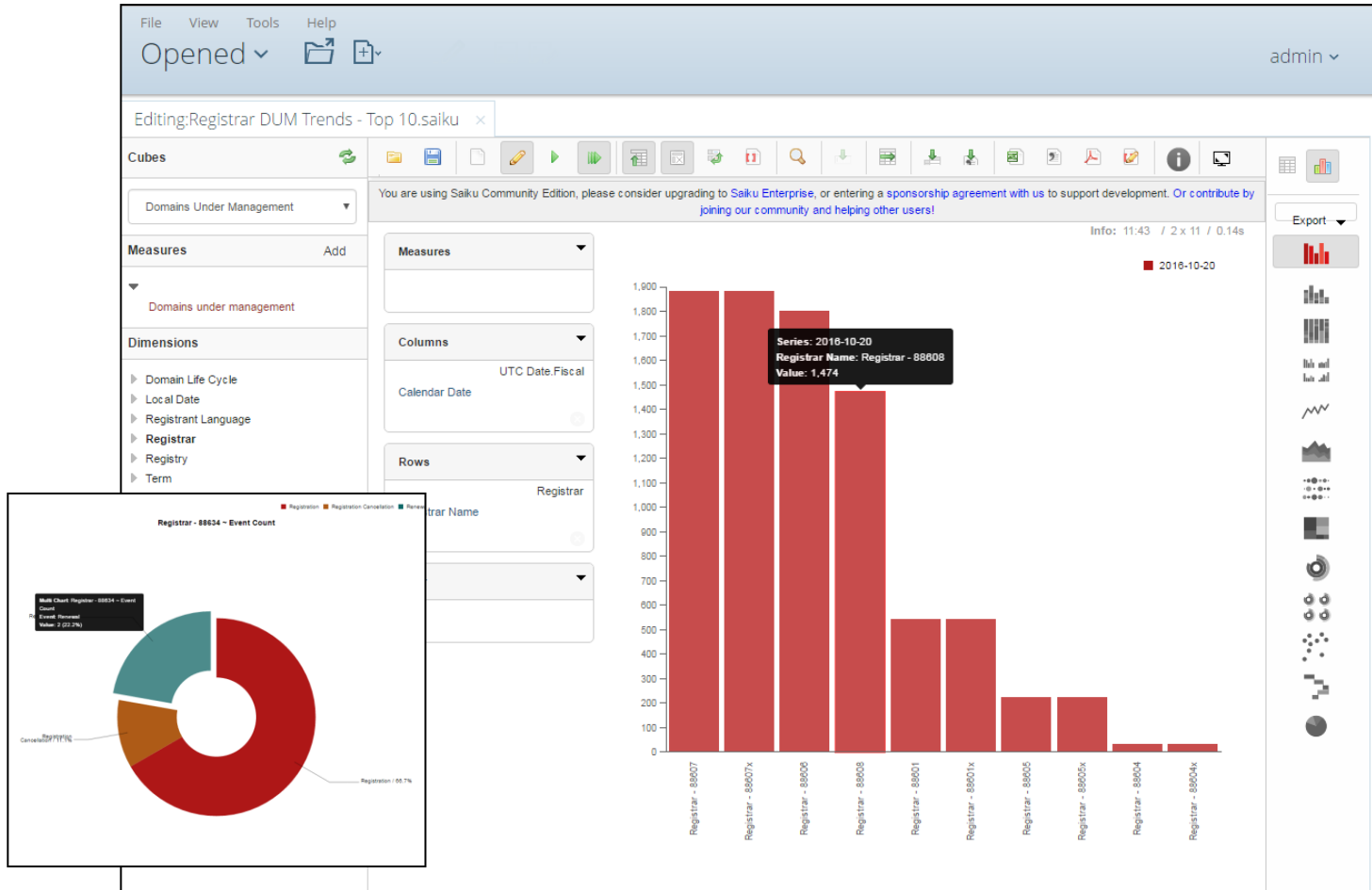
Transaction ID	Transaction Date	Domain/Ref#	Term	Event	Tag	Amount
709738	2016-10-07 15:38:13	test2dss.fury1	7 Year	Renewal	renewal-7	175.00
Registrar Total:						175.00

Report Total: 175.00

Transaction Date Start: 2015-11-29 19:00:00 EST
Transaction Date End: 2017-03-05 19:00:00 EST
Event: Renewal
Registrar: Registrar - 88603
Term: 7 Year

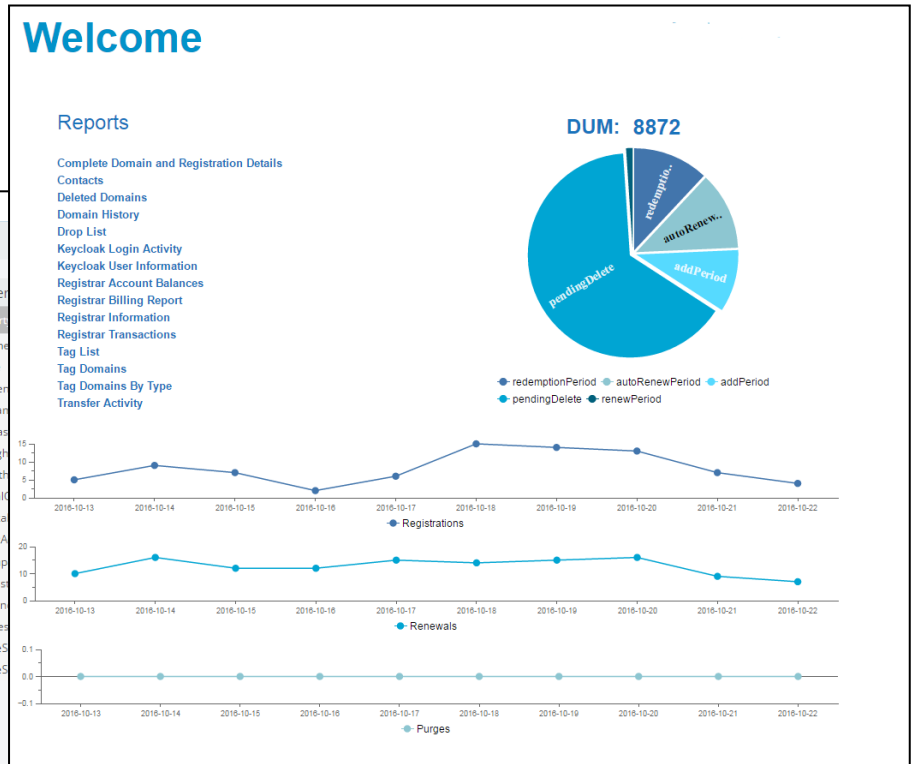
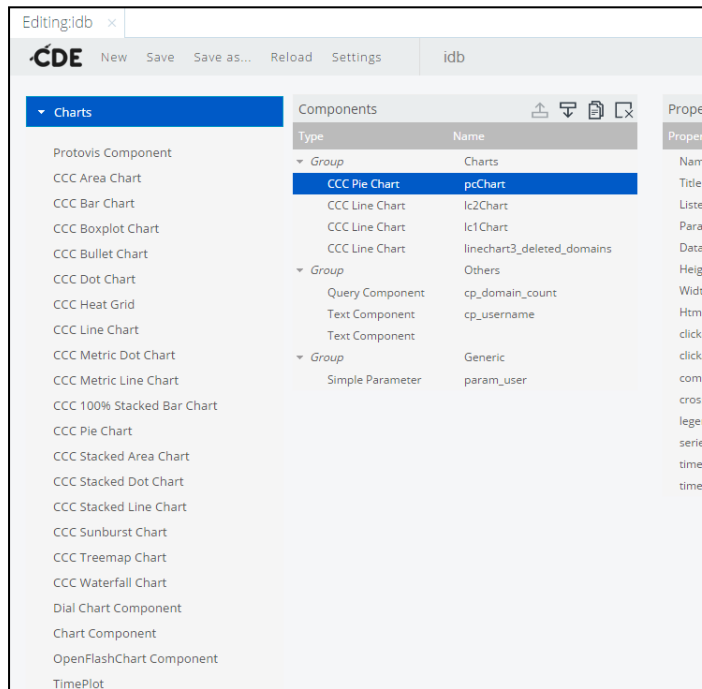
REPORTING AND ANALYTICS

- Plugins – Saiku Analytics



REPORTING AND ANALYTICS

- Community Dashboard Framework / Editor



REPORTING AND ANALYTICS

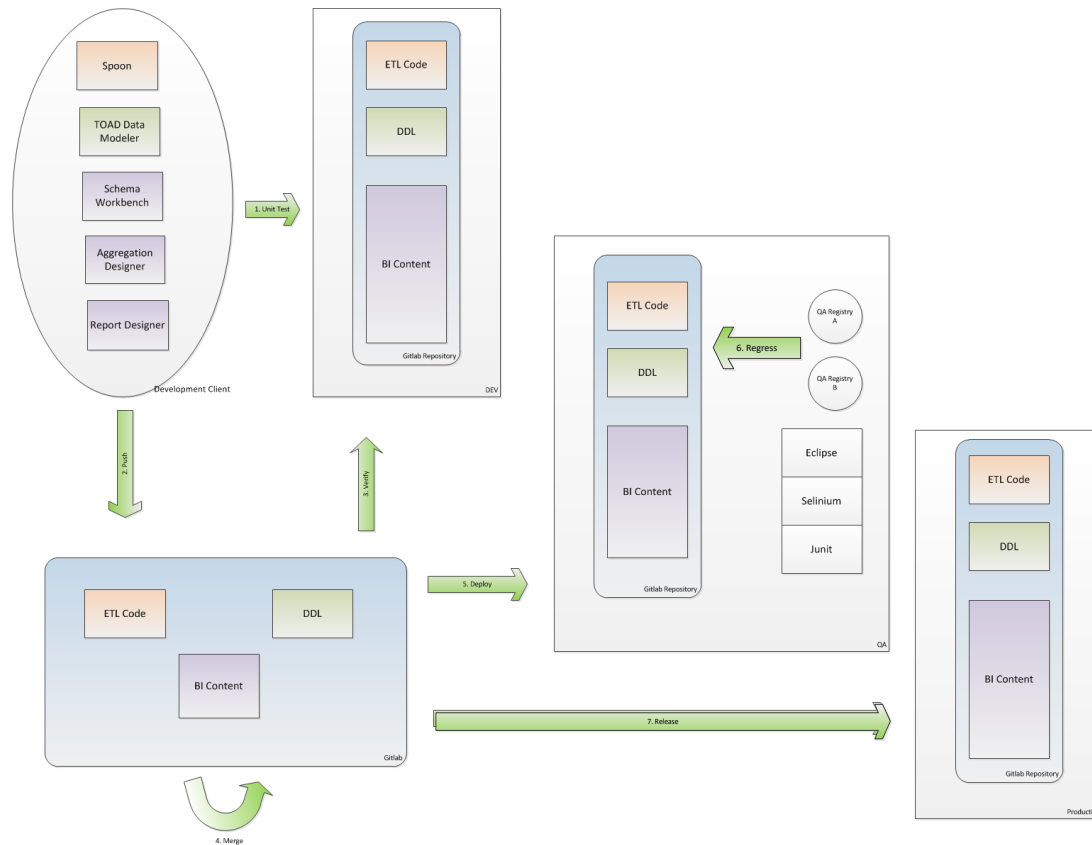
- Embedded Dashboard components

The screenshot displays the FURY dashboard interface. The top navigation bar includes links for HOME, DOMAINS, CONTACTS, HOSTS, and ADMIN. The main content area is titled "Edit Domain" and is divided into several sections:

- Info:** Displays domain details such as Domain Name (nick.fury), U-Label (nick.fury), Sponsoring Registrar (Fury_RAR), Expiry Date (2018-03-06 21:51:10 (UTC)), Stage Of Life (addPeriod), and Authorization Code (RGeLuvWwWosdZ8D).
- Status:** Shows Client Status, Server Status, and Support Status with various checkboxes for actions like delete, hold, renew, transfer, and update.
- Hosts:** A table listing hosts with columns for Host Name, IPv4 Address, IPv6 Address, Registrar, and Status.
- Contacts:** A table listing contacts with columns for Name, Contact ID, Phone Number, Email Address, and Contact Type.
- Tags:** A table listing tags with columns for Tag Name, Type, Events, Description, Registrars, Applies To, Effective Date, and Expiry Date.
- Statistics:** Two line charts: "DNS Queries By Day" and "Whois Searches By Day", showing trends over time.

TESTING AND CHANGE MANAGEMENT

- Git used for source control and deployment
- QA Testing architecture leveraged for ETL Regression



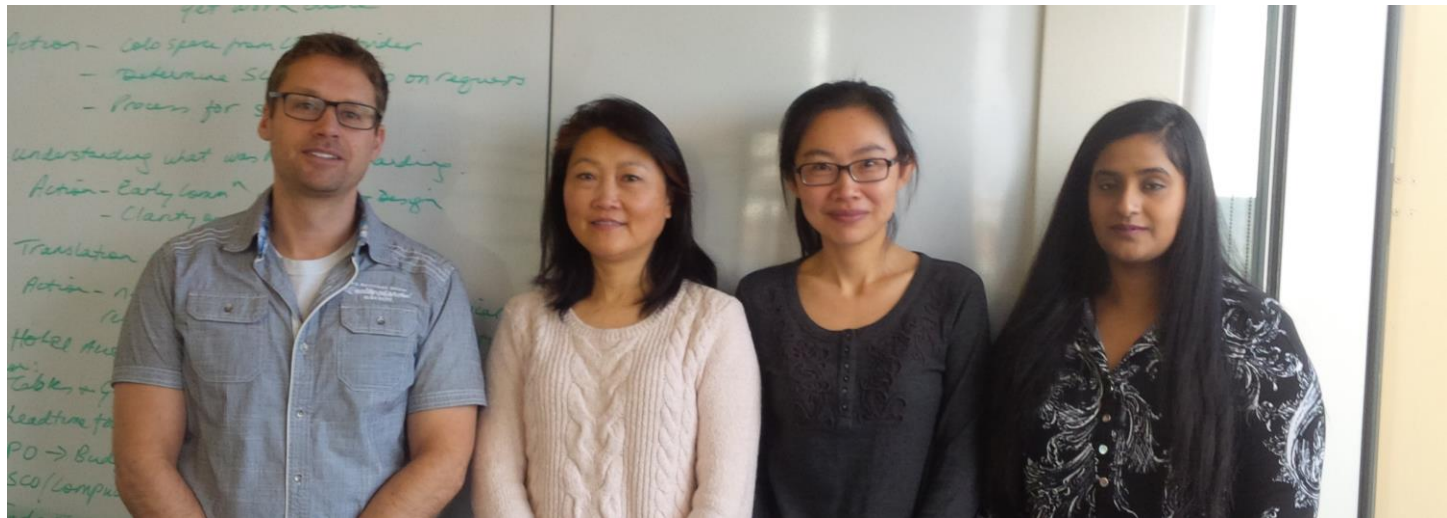
TAKEAWAYS FROM OPEN SOURCE BI PROJECT

- PDI Community Edition is a robust ETL/Data integration tool which provides a great amount of flexibility when dealing with a variety of traditional data sources as well as “Big Data” data sources.
- PDI integration with Pentaho Reporting provides the ability to easily burst complex reports to a wide audience via file management and emailing capabilities.
- PDI IDE provides for rapid ETL development and testing environment
- Deep ETL logging framework provides detailed insights into ETL performance and runtime metrics.
- PDI CE lacks scheduling infrastructure (available in Enterprise Edition) therefore requiring separate scheduling software and processes.

TAKEAWAYS FROM OPEN SOURCE BI PROJECT

- Pentaho Business Analytics Platform provides tools and processes to deliver advanced reporting and analytics capabilities to end users.
- Development tools are extremely flexible and configurable, but are not as easy and intuitive to use as established enterprise BI vendor software.
- For advanced reporting capabilities and dashboard creation, javascript coding skills are required.
- Documentation related to advanced reporting functionality is not readily available.
- Active community of developers provides flexibility through plugins, but plugin quality can vary greatly.
- Attractive, dynamic dashboards can be created with open source framework. Complex interactive dashboards can be integrated into other applications, but this requires more advanced coding skills.

CIRA IM TEAM



Jon



June



Shanshan



Namita



QUESTIONS?

If you would like further details, contact: Jon.Coote@cira.ca

APPENDIX

Pentaho Community & Enterprise Edition Product Comparison

Which of the new 6.1 capabilities are available in CE?

Pentaho 6.1 is built on an 'open core' model which means that development to the core 'engines' in the platform - Analyzer, Kettle, Mondrian are all included in Community Edition (CE). Features built on top of the core that specifically benefit enterprise-scale business analytics such as re-startability, load balancing and support for data federation are only available in Enterprise Edition (EE). Admin and security features for ease of use, visualizations are all in EE. (See matrix below for details)

Feature	CE	EE
Rest API	X	X
Action Based Security	X	X
PUC plugin layer	X	X
Pentaho User Console Update	X	X
Home Page	X	X
Scheduling System	X	X
Audit Reporting		X
Administration Console	X	X
Kerberos Support for Hadoop		X
Hadoop High Availability Support		X
InstaView Templates		X
R API plugin	X	X
R Script Executor		X
Weka Forecasting Plugin		X
Weka Machine Learning Plugin		X

Native YARN Integration		X
Analyzer Native Integration with Mongo DB		X
Mongo DB Reporting	X	X
Centralized Connection Management	X	X
Web-based ETL Parameter Support Auto		X
Publishing		X
Auto Modeling		X
Analyzer Enhancements		X
Dashboard Enhancements		X
Migration Tool	X	X
Packaged Installation Files and Support		X
Docs PRO Improvements	X	X
Job Restartability – PDI		X
Transaction Control – PDI		X
Connection Security – PDI		X
Load Balancing		X
Data Federation – JDBC Data Services		X
Marketplace – POI	X	X
POI Enhancement – Other	X	X
New BO Integrations	X	X
New Hadoop Certs	X	X
MondoDB EOU – POI	X	X
Cassandra Enhancements	X	X
Python Native Integration	X	X