**ORE Data Engine v1.0**

**Requirements**

* Lightweight
* Low cost running in cloud
* Easy to use
* Simple
* Multitenant
* Config-driven

**Technology**

**PostgreSQL** 9.5.5on x86\_64-pc-mingw64, compiled by gcc.exe (Rev5, Built by MSYS2 project) 4.9.2, 64-bit

***Why***

Low cost if running in AWS in comparison to MS SQL Server, open source, good support, powerful and has potential for development of quite complex product (common table expressions, analytical functions, merge, etc).

***Design approach***

Data Vault is our approach to building data store for individual clients. It gives a framework for relatively quick build and support process which means it is highly reproducible and automated. Though human effort is still needed for DV modelling and configuration.

**Blocks**

**ORE data store is** config-driven engine. It stores client’s data vault config. See Pic 1 and Pic 2.

*Config engine****(b1)***

* + Configuration database **(b1.1)**
  + Configuration setup **(b1.2)**

*Model implementation engine****(b2)***

* + Data vault setup **(b2.1)**
  + Data vault orchestration **(b2.2)**

*Configuration database*

Pretty much all structures for building data vault.

Version 1.0 includes:

Owner

Release

Schedule

Source system

Source table -> source columns

Hub -> hub keys -> hub columns

Satellite -> satellite columns

Defaults

Exception(logging)

Auditing structures (triggers, constraints, keys, indices).

*Configuration setup*

Scripting logic to add, delete, modify config data, populate source table/satellite/hub config columns using source data.

Example – use case

Procedure to insert, update, delete config data for hub.

*Data Vault setup*

Scripting logic to create data vault objects using data stored in configuration database. Should be as simple as possible – to create objects with minimum effort.

Example – use case

Procedure to create hub.

*Data Vault orchestration*

Scripting logic to perform data vault orchestration tasks, e.g. loading data into hubs, satellites, etc.

Example – use case

Procedure to load satellite.

Pic 1. Structural overview



Pic 2. Config data store v1.0 structure

