Data Processing and Management System 10000

DPMS10K

Technical Description

October 2009

Version 7

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1 Introduction

In today's dynamic Telecom environment, operators need to be able to introduce and implement new services and features rapidly to maintain their competitive edge. B/OSS platforms are a key component in this environment.

To help operators maintain their edge, Telegence has introduced the Data Processing and Management System 10000 (DPMS10K) platform. The DMPS10K is a highly flexible and efficient platform that allows rapid development of data processing applications. It can augment existing systems to enhance their functionality or be used to introduce new functions.

The DPMS10K is designed to provide a high level of flexibility and configurability to allow subject matter experts to modify and enhance the system as the business rules change, eliminating the need for expensive and time consuming software development.

2 Feature Overview

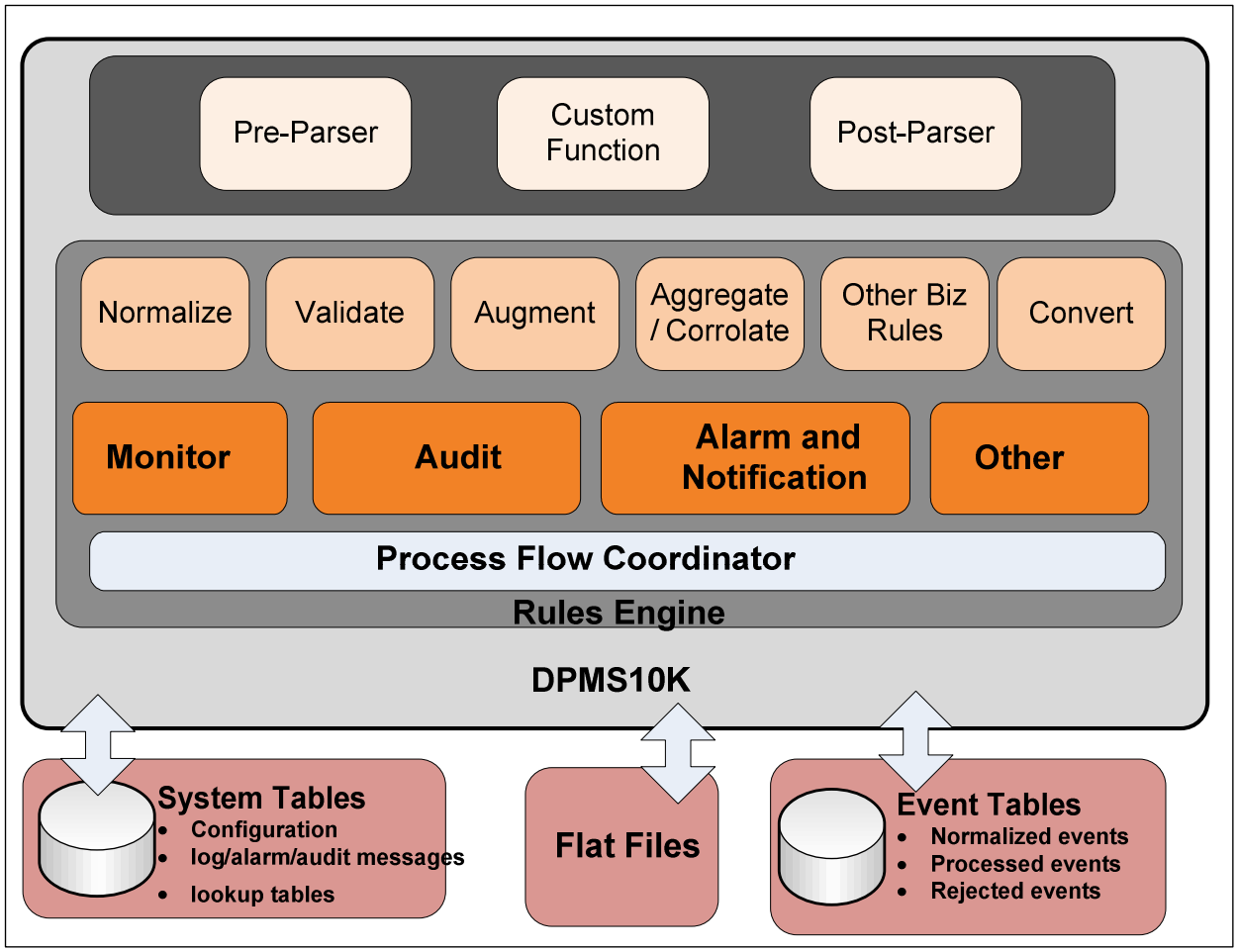
The DPMS10K includes a highly flexible data processing engine complemented with special purpose modules to perform specific tasks that are too complex for a general purpose engine. The components of the DPMS10K system are designed and selected based on the extensive Telegence experience in the data collection, data mediation and data processing.

The key features of the system are:

- Highly configurable and efficient processing engine
- Special purpose modules designed and implemented based on solutions specific needs
- Database technology independent
- Highly scalable
- Multiple resiliency options

3 System Architecture

The DPMS10K is built on a data processing rules engine. The diagram below shows the system components.

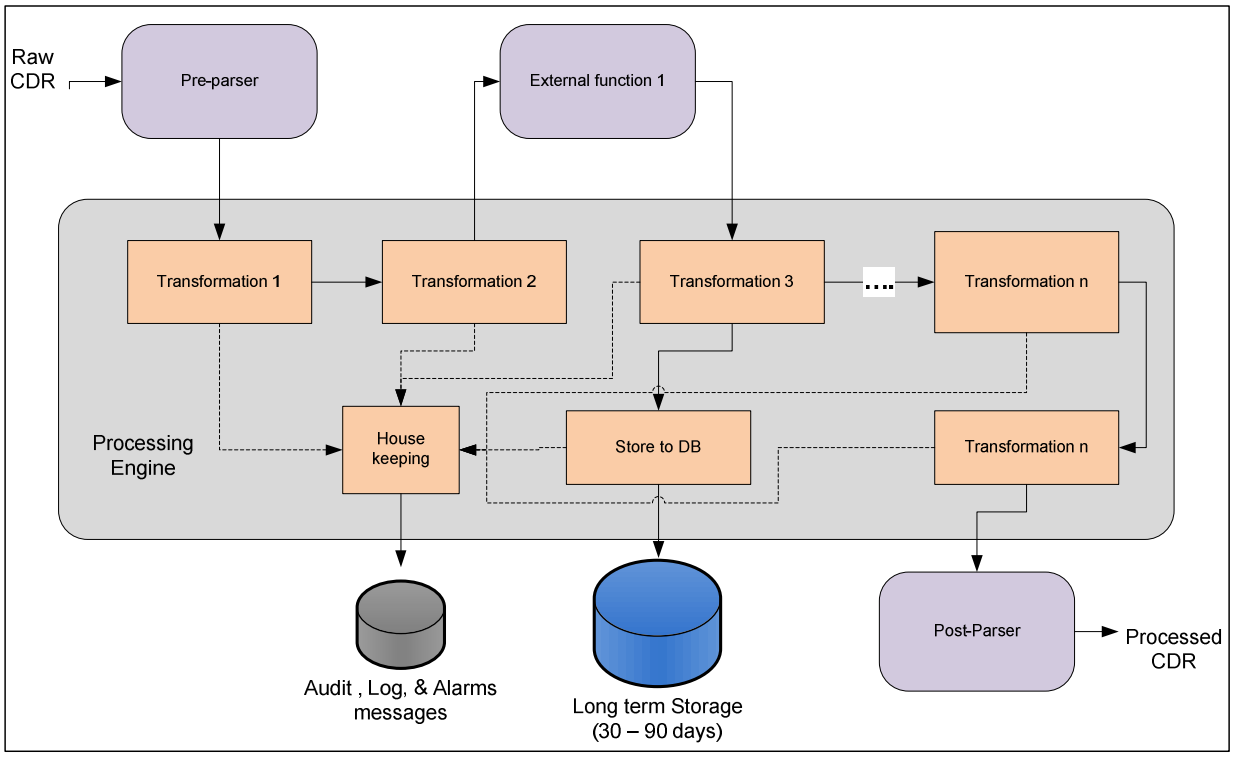


3.1.1 Process Flow Coordinator (PFC)

The PFC is responsible for starting and executing various internal and external data processing modules based on configuration parameters. Process flows are defined using the configuration GUI and multiple flows can be defined and executed simultaneously.

The PFC can be configured to execute different modules and/or complete flows on different processors. This feature provides processing distribution to enhance overall system performance and scalability, and also to provide protection in case of hardware failure.

The PFC includes a scheduler to start flows automatically. Figure below shows an example of a data flow.



3.1.2 Transformation Engine (TE)

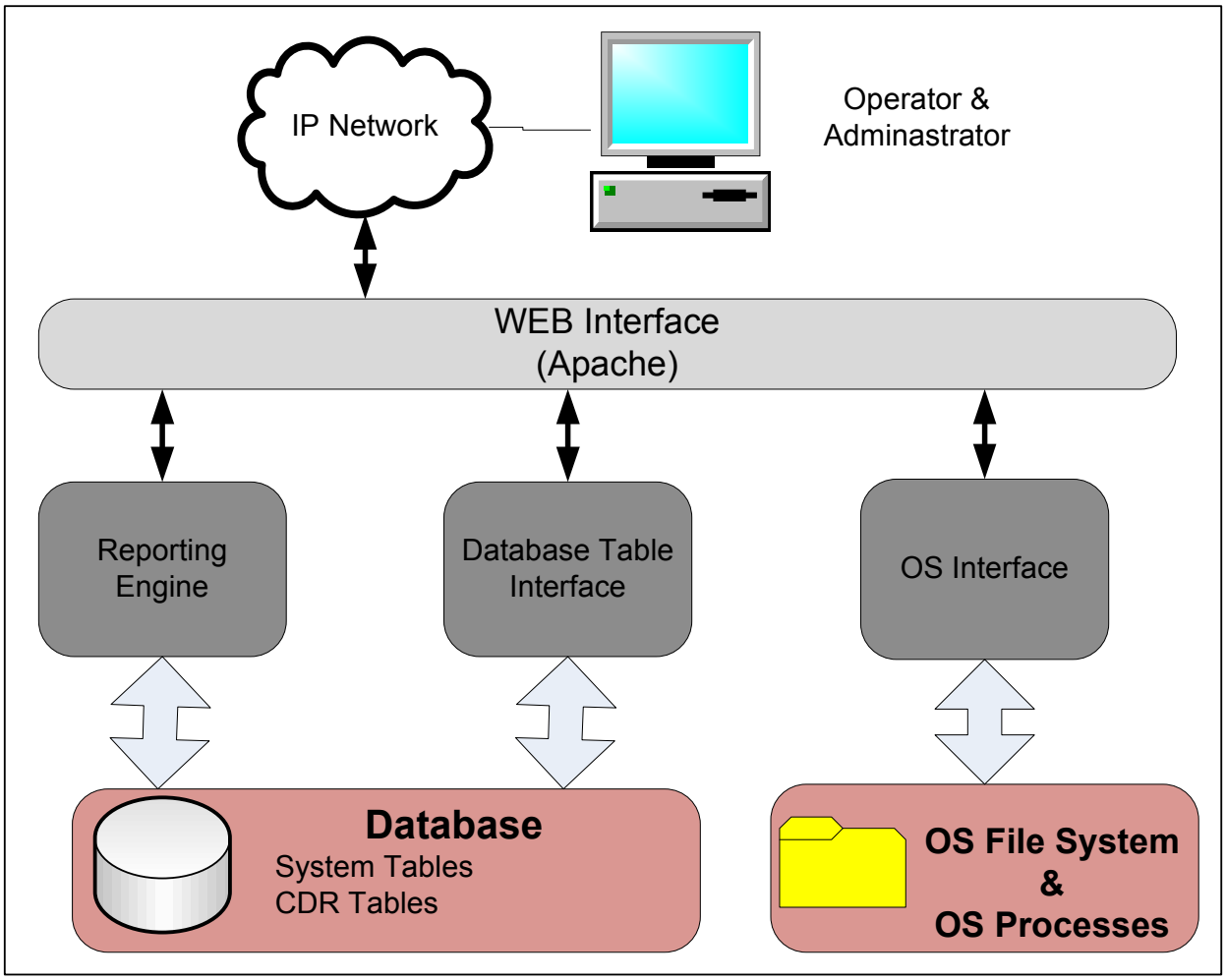
The data transformation engine allows the user to define the data processing based on the user's business rules. It takes one or more input data stores and creates one or more data stores. Data stores can be database tables or flat files. In a transformation process, the user can perform validation, reformatting, augmentation, correlation, aggregation, and other data processing tasks to a achieve their business objectives.

3.1.3 System Configuration

The PFC and TE are configured via the configuration GUI. The configuration GUI is a thick client application that typically runs on Windows. It is used by subject matter experts and does not require computer-programming skills.

3.2 Operator User Interface and Reporting

The users or operators of the system use a WEB based GUI to access the records, lookup tables, and reports generated by the system. The diagram below shows the architecture of the operator interface.



4 Applications

As mentioned above, the DPMS10K is a data processing platform that can be used to implement various data processing applications. Below are some examples of DPMS10K capable applications:

- Usage data mediation: This application processes raw usage information from network elements and delivers the data to downstream systems such as billing, fraud, interconnect, etc.
- Fault, Configuration, Accounting, Performance, and Security (FCAPS): This application allows telecommunication operators and enterprises to manage their IT devices.
- Provisioning: This application provides an interface between billing and customer care systems on one end and network elements at the other end to provision new subscribers and services.