



Planning Data Analyzer (PDA) White Paper

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Overview of PDA

Background

Production planning software (like ASCP, APO etc) requires data from supply, demand, master records and planning factors to carry out a production plan. IT infrastructure is used to gather this data from different systems such as MES, customer database, and so on. In the most cases, planners do not have means to decide whether the data used to run the production plan is accurate, complete, and latest in qualitative and quantitative aspects. The absence of a support system, which can rate the quality of data being fed, often prompts planners to override the results and schedules obtained from the planning engines. Planning Data Analyzer provides a report about the quality of the data being used for the production run.

Capitalizing on years of experience in implementing supply chain and planning solutions for medium to large high-tech companies, Triniti has developed a solution to accurately rate the quality of data being input to planning engines. This solution, which is called Planning Data Analyzer (PDA), helps planners identify and fix data issues, and avoid overriding planning results on an ad-hoc basis. Triniti combined its business and technical expertise to design PDA as a powerful solution for efficiently managing planning data quality.

Planning Data Analyzer tool monitors Key Quality Indicators (KQI) and provides analytical metrics to ensure that the business processes produce accurate data quality. This tool also monitors the stability of the system infrastructure used throughout the supply chain. PDA also provides a repeatable, sustainable, and efficient planning environment with high quality data.

About Planning Data Analyzer

Triniti Planning Data Analyzer is designed to focus data cleansing efforts on high impact products (end items). Impact is determined by the amount of Revenue and Capacity consumption on bottleneck resources. Improving data quality for high impact products provides large positive benefit to business. This tool facilitates to scan all BOM levels and Sourcing Rules for each end item. An end item fails if any of its components fail.

The Planning Data Analyzer consists of three parts:

- Dashboard
- Setup for KQI, Go/NoGo, Override, and Reliability
- KQI execution

Dashboard:

The dashboard module is used to view the reports related to the data of KQIs that are categorized under different areas and aspects.

Setup:

The KQI Setup allows the user to configure KQIs and GoNoGo items, add override reason and set values based on which reliable KQIs are categorized. Using KQI Setup the user can specify the characteristics and rules for each KQI. The KQIs are executed based on these conditions specified by the user. Go/NoGo Setup is used to view the list of items that have a major impact in terms of amount of Revenue or Capacity consumed. This module is also used to setup GoNoGo items (where user specifies the rules that are used to identify Go/NoGo items and these Go/NoGo items are executed by identifying the items that follow the rules).

KQI Execution:

The KQI Execution module is used to execute Data Input KQIs (Go/NoGo KQIs and Analytical KQIs) and Performance Monitoring KQIs. The Go/NoGo and Analytical KQIs can be scheduled for execution.

Architecture

High Level Architecture

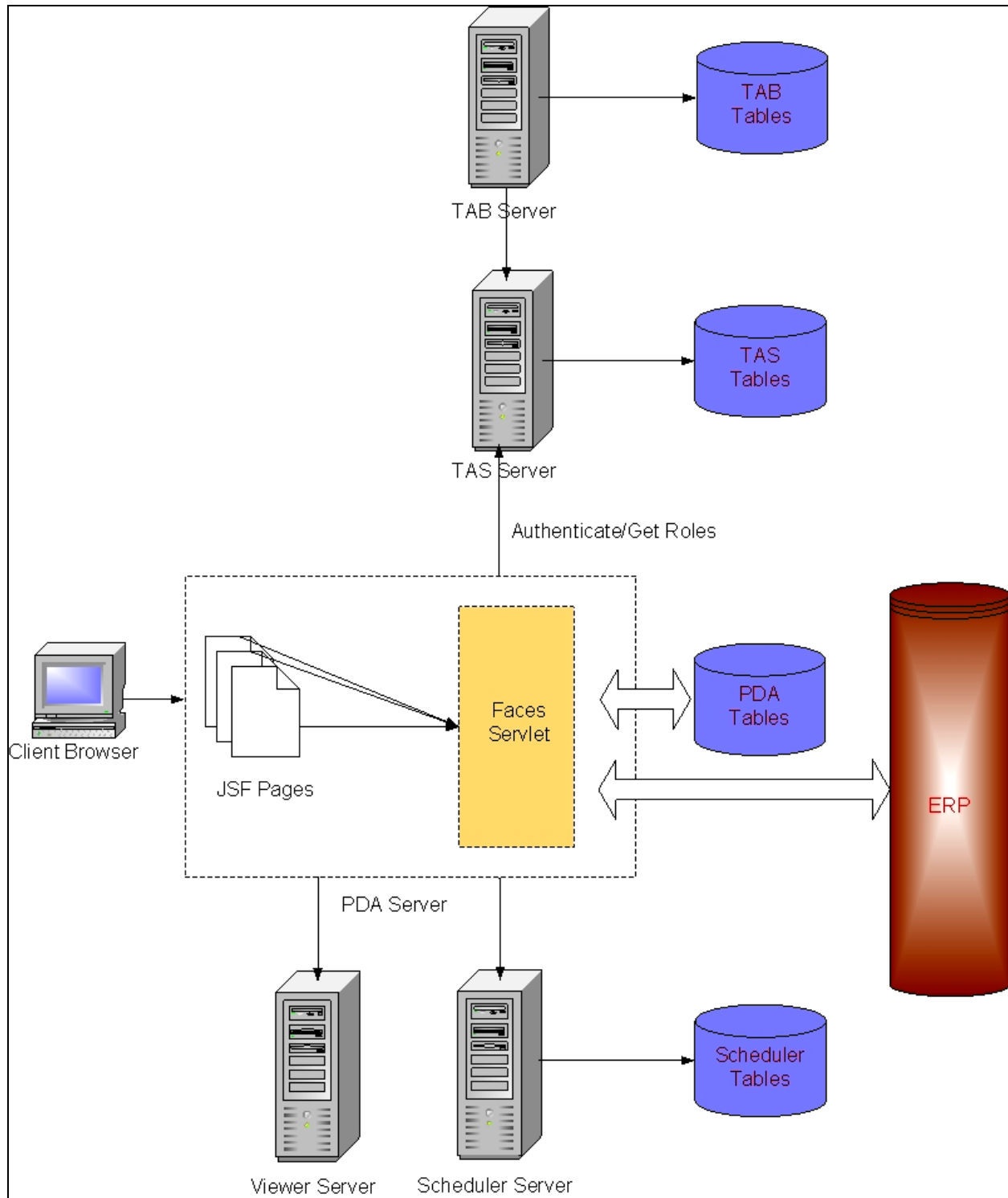


Figure 1

Client Browser

PDA is a web-enabled application. Users can access PDA application using Microsoft Internet Explorer. As the user interface of PDA is developed using Java Server Faces, users can access the application from anywhere in the world using the appropriate URL.

PDA Server

PDA Server hosts the required software to show the Error Reports which will help the users to improve the Data Quality. It communicates with the PDA tables, TAS server, Viewer Server and Scheduler Server.

TAS Server

TAS Server hosts the software that authenticates the users and their access privileges to the applications. TAS Server communicates with TAB Server and PDA Server.

Scheduler Server

Scheduler Server hosts the required software to schedule a Job, so that the job will be fired as per the schedule. It communicates with the SCH tables and TAS server.

TAB Server

TAB Server hosts the required software to build and configure applications. It communicates with the TAB tables, TAS server.

Viewer Server

Viewer Server hosts the required software to display the result data. It communicates with the PDA tables.

PDA Tables

PDA tables store data that is critical to the functionality of the PDA Application. These tables store data pertaining to KQIs (KQI Query, Parameters and Result Configuration, Execution Result etc), Go/NoGo Setup, Scheduling, Alerts, and so on.

SCH Tables

SCH tables store data pertaining to Job Types, Schedule Types, Jobs, Schedules, Scheduled Jobs, and so on.

TAS Tables

These tables store data pertaining to users of an application and their roles.

TAB Tables

TAB tables store data that is critical to the functionality of the applications built by TAB. These tables store data pertaining to nodes, node properties, categories, business relations, user roles, application properties, and so on.

Benefits

- Enables users of ERP, ASCP, Business Intelligence and reporting tools to TRUST all planning data.
- Prevents catastrophic data errors from being used by planning engine.
- Eliminates need for extensive verification of planning output.
- Reduces need for manual override of planning output.
- Proactive analytic KQIs drive robust business processes for data creation and maintenance.
- Provides a point of differentiation in marketplace with customers, vendors and subcontractors (Accurate data lowers cost for ALL in extended supply chain).
- Proactively monitors the stability of the system infrastructure used throughout the supply chain.
- Provides an organized method to improve data quality.
- Ability to manage tolerances for data quality (slowly tighten as data improves).