Introduction to PRIMAVERA Project Management module

The PRIMAVERA Project Management module is a complete, multi-project planning and control software that is built on Oracle and Microsoft SQL Server relational databases for organization-wide project management.

It enables organizations to store and manage its projects at a central location and supports the following:

- Work Breakdown Structures (WBS)
- Organizational Breakdown Structures (OBS)
- Critical-Path-Method (CPM) scheduling
- User-defined fields and codes
- Resource leveling

The need for PRIMAVERA

- It is a comprehensive project management solution provider
- Used and acknowledged globally
- It can manage multiple projects in a centralized location
- It gives the option to integrate ERP or accounting system.
- It is a web-based project management, providing the project team access to their projects anywhere and anytime.
- It is a 100% web-based user interface that covers the complete project management lifecycle.
- It gives the creation of Work Breakdown Structure (WBS) and activities, managing status updates, reporting on key performance indicators like earned value, and documenting and managing project issues and risks.
- It helps organizations ensure communication between project team members.
PRIMAVERA in comparison with using other conventional planning tools

Centralized Project Repository: All projects are located in a centralized database which has a robust security module that protects project data and offers flexibility in providing different people with access to the different projects.

Enterprise Project Structure (EPS) & Codes: A configurable Enterprise Project Structure (EPS) analyzes the organizational needs and, based on that, helps form the hierarchical structure of the projects. Extensible Project Codes capture the different attributes of projects.

Cross-project Analysis and Reporting: It allows creating cross-project dependencies and analyzing the impact of one project on the other. Built-in analysis evaluates the allocation of resources across projects.

CPM Scheduling: P6 provides Critical Path Method (CPM) Scheduling, which calculates a schedule for the projects using the durations of activities, relationships between different activities and calendars. CPM identifies the critical path of activities that could have impact on the completion date of the project or an intermediate deadline.

Float Path Analysis: It identifies the different paths within a project to help avoid potential delays and to help visualize an activity's significance to the project.

Cross-Project Dependencies: It helps monitor overall critical path of the program and reduce the risk of multiple parties working together.

Resource Assignments: After determining the needs of project resources, they can be assigned to the different activities. P6 tracks labor, equipment, material and expense needs for WBS nodes and activities.

Resource Leveling: It helps ensure that adequate resources are available to perform the activities in the project plan.
Baseline Management: It stores unlimited versions of the schedule, resources and cost assignments to compare the progress of the project with the original plan as well as the last update cycle and the progress 6 months ago, etc.

Projects Reports: Select from more than 150 predefined reports and unlimited custom reports.

ERP or Accounting Integration: In order to share the schedule and cost information, the P6 architecture allows for integration with ERP or Accounting Systems.

Offered Products of PRIMAVERA for Corporate level Project Management

<table>
<thead>
<tr>
<th>Product</th>
<th>Components</th>
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<tbody>
<tr>
<td>Power User (Client)</td>
<td>Web Projects, Resource Portfolios, Advanced</td>
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<tr>
<td></td>
<td>Portfolio &amp; Capacity Planning, Dashboards,</td>
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<td></td>
<td>Collaboration, Time Sheets</td>
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<tr>
<td>Functional User</td>
<td>Web Projects, Resource Portfolios, Advanced</td>
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<td></td>
<td>Collaboration, Time Sheets</td>
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<tr>
<td>Contributor</td>
<td>Web Projects limited to activity updating,</td>
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<tr>
<td></td>
<td>Collaboration, Time Sheets</td>
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Techniques used for Scheduling Projects

CPM — Critical Path Method
CPM mathematically calculates a schedule for the entire project by using activity durations and the relationships between different activities. It focuses on the critical path of activities that has an impact on the completion date for the project or an intermediate deadline. It also calculates the earliest possible dates each activity can start and finish and the latest possible dates each activity can start and finish without delaying the project finish or an intermediate deadline.

PERT — Program Evaluation and Review Technique
PERT is fairly similar to CPM, but instead of using just the most likely time estimate for completion of an activity, it uses a probabilistic estimate of time.

Integration of PRIMAVERA with SAP
Many companies that have project management needs use SAP as their integrated backbone for enterprise financials & control. Seasoned schedulers & project managers opt for the project
management focus of Primavera Project Planning software for critical execution processes, such as planning, scheduling, and tracking of execution. Therefore, powerful process integration retains the strengths of SAP as well as Primavera Project Planning software, enabling the best use of software packages.

**Structuring Projects using PRIMAVERA**

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
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<tbody>
<tr>
<td>1.</td>
<td>Setting-up and define EPS (Enterprise Project Structure).</td>
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<td>2.</td>
<td>Add a project to the EPS hierarchy.</td>
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<tr>
<td>3.</td>
<td>Defining WBS (Work breakdown structure) to the Project.</td>
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<tr>
<td>4.</td>
<td>Defining OBS (Organisational breakdown structure)</td>
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<tr>
<td>5.</td>
<td>Defining Resources.</td>
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<tr>
<td>6.</td>
<td>Create Calendar for Activities &amp; Resources.</td>
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<td>7.</td>
<td>Add activities to WBS.</td>
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<tr>
<td>8.</td>
<td>Input activity details.</td>
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<tr>
<td>9.</td>
<td>Schedule project.</td>
</tr>
<tr>
<td>10.</td>
<td>Updating progress after project starts.</td>
</tr>
<tr>
<td>11.</td>
<td>Preview / Print reports (Default / Custom made reports).</td>
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</table>

*Figure 1: Steps in EPS (Enterprise Project Structure)*
The Enterprise Project Structure (EPS) forms the hierarchical structure of the database of projects.

Each EPS node (or folder) can be subdivided into different levels to represent the work that needs to be done in an organization. The number of levels and structure depends on the scope of the projects and the way the data needs to be summarized.
Adding Projects in EPS Hierarchy

Unlimited number of projects can be organized in groups in EPS.
WBS (Work Breakdown Structure)

A WBS is a hierarchy of work that must be accomplished in order to complete a project. The WBS is structured in levels of work detail, and is then separated into identifiable work elements.

Figure 3: WBS for a Construction Project
OBS (Organizational Breakdown Structure)

The organizational breakdown structure (OBS) is a global hierarchy that represents the managers responsible for the projects in an organization. The OBS usually reflects the management structure of an organization. We can associate the responsible managers with their areas of the EPS, either nodes or individual projects.

![OBS Diagram](image)

Figure 4: OBS for a Construction Project
Defining Resources

Resources include the personnel as well as the equipment required to perform work on activities across the different projects. Resources are generally reused between projects and activities.

Creating Calendars

Calendars define the available work-hours in each calendar day, and they are created and assigned to each resource and activity. National holidays, organizational holidays, project-specific non-workdays, and resource vacation days can be specified in the calendar. Calendar assignments are used for activity scheduling, tracking, and resource leveling.
Screenshot 4 & 5: Creating Calendar in PRIMAVERA
List of common Inputs / Information to be given to an activity

- Activity ID, Name & Type
- Start and finish dates
- Steps of an activity
- Relationship between activities
- Resource Assignment
- Activity Calendar
- Constraints
- Status of activity
- Expenses
- Other comments, notes etc.

Screenshot 6: Adding Activity to WBS
Scheduling Project

Project schedule can be calculated by either of following ways:

- By choosing the Scheduling command
- Making a change that affects schedule dates

The Critical Path Method (CPM) scheduling technique is used to calculate project schedules. It does so by using activity durations and relationships between activities.

Updating Progress

The following inputs are entered in the activity detail form to update the progress of the individual activity:

- Start Date (If activity is started)
- Finish Date (If activity is completed)
- % of duration completed (if activity is in progress)
- Remaining duration to complete activity
Screenshot 8: Project Progress Status

Screenshot 9: Screenshot of Oracle Primavera P6
References

- PRIMAVERA Project Planner ® Planning and Control Guide
- Introduction to PRIMAVERA Project Management Module (P6)

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