


EASTWOOD HARRIS

**PROJECT PLANNING AND CONTROL
USING ORACLE® PRIMAVERA® P6**

VERSION 8.2 EPPM WEB



PAUL E. HARRIS

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Welcome to the
**Eastwood Harris Pty Ltd
 Primavera P6
 Versions 8.2
 EPPM Web Tool**
 2 day training course
 "Enterprise Portfolio Project
 Management"

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**IMPORTANT POINTS FOR
INSTRUCTOR**

- See notes below.

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Administration

- Evacuation
- Facilities, timings and meals
- Mobile phones & Emails
- Introductions:
 - Your name,
 - The types of projects you are involved in,
 - Your experience in scheduling software and
 - What you seek from this course,
- Course attendance sheet,
- Course conduct.

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Course Aim

This course aim to teach participants:

- Introduction to the user interface,
- How to create and plan projects without resources including creating the WBS, adding activities, relationships and constraints,
- Formatting, filters, layouts and printing,
- Assigning Baselines and updating an un-resourced project,
- Adding and assigning Roles and Resources,
- Updating a Resourced project,

Successful completion of the workshops is required to complete the course.

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Course Agenda

DAY 1

- 1 - Introduction
- 2 - Creating a Project Plan
- 3 - Starting Up and Navigation
- 4 - Creating a New Project
- 5 - Defining Calendars
- 6 - Creating a Primavera Project WBS
- 7 - Adding Activities and Organizing Under the Wbs
- 8 - Formatting the Activity Window and Views
- 9 - Adding Relationships
- 10 - Activity Network View
- 11 - Constraints

continued...

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Course Agenda

DAY 2

- 12 - Printing and Reports
- 13 - Scheduling Options and Setting a Baseline
- 14 - Updating an Unresourced Schedule
- 15 - Administer Menu
- 16 - Creating Roles and Resources
- 17 - Assigning Roles, Resources and Expenses
- 18 - Resource Optimization
- 19 - Updating a Resourced Schedule
- 20 - Other Methods of Organizing Project Data
- 21 - Index.

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1 - INTRODUCTION

- 1.1 - Purpose
- 1.2 - Required Background Knowledge
- 1.3 - Purpose of Planning
- 1.4 - Project Planning Metrics
- 1.5 - Planning Cycle
- 1.6 - Levels of Planning
- 1.7 - Monitoring and Controlling a Project.

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1.1 – Purpose of the course

- Provide a method for planning, scheduling and controlling projects using Primavera,
- Within an established Enterprise Project database or a blank database,
- Up to an intermediate level.

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1.2 - Required Background Knowledge

- The ability to use a personal computer and understand the fundamentals of the operating system,
- Experience using application software such as Microsoft Office and
- An understanding of how projects are planned, scheduled and controlled, including understanding the project management processes applicable to your projects.

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1.3 - Purpose of Planning

- The ultimate purpose of planning is to build a model that allows you to predict which activities and resources are critical to the timely completion of the project,
- Strategies may then be implemented to ensure that these activities and resources are managed properly, thus ensuring that the project will be delivered both **On Time** and **Within Budget**.

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Planning aims to:

- Identify the total scope and stakeholders
- Plan to deliver the scope and understand the risks
- Evaluate different project delivery methods
- Identify the deliverables under a logical breakdown of the project, often called WBS or PBS
- Identifying activities required to produce the deliverables
- Identify and optimize the use of resources
- Evaluate if target dates may be met
- Identify risks and plan to minimize them
- Provide a baseline plan
- Assist in stakeholders' communication
- Assist management to think ahead and make informed **decisions**

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2.4.5 Add the logic Links

The PMI defines three types of logic:

- Mandatory dependencies,
- Discretionary dependencies,
- External dependencies.

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2.4.6 - Developing a Closed Network

- In a **Closed Network** every activity, except the project start milestone(s) and finish milestone(s), has one or more:
 - Start Predecessors, and
 - Finish Successors.

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2.4.7 - Scheduling the Project

- When a schedule has a **Closed Network** scheduling the project will identify the:
 - Critical Path(s)
 - Total Float
 - Free Float
 - Plus other useful data such as Driving Relationships.

Activity ID	Activity Name	Start	Finish	Aug 31	Sep 07	Sep 14
◆ A1000	Start MS	01-Sep-14	01-Sep-14			
■ A1010	Activity A	01-Sep-14	05-Sep-14			
■ A1020	Activity B	08-Sep-14	12-Sep-14			
■ A1030	Activity C	15-Sep-14	19-Sep-14			
■ A1040	Activity D	01-Sep-14	02-Sep-14			
■ A1050	Activity E	08-Sep-14	09-Sep-14			
◆ A1060	Finish MS	19-Sep-14	19-Sep-14			

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2.4.8 - Critical Path(s)

- The Critical Path is the shortest duration that a project may be completed in and a delay to any activity will delay the end date of the project, shown in red below:

Activity ID	Activity Name	Start	Finish	Aug 31	Sep 07	Sep 14
◆ A1000	Start MS	01-Sep-14	01-Sep-14			
■ A1010	Activity A	01-Sep-14	05-Sep-14			
■ A1020	Activity B	08-Sep-14	12-Sep-14			
■ A1030	Activity C	15-Sep-14	19-Sep-14			
■ A1040	Activity D	01-Sep-14	02-Sep-14			
■ A1050	Activity E	08-Sep-14	09-Sep-14			
◆ A1060	Finish MS	19-Sep-14	19-Sep-14			

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2.4.9 - Total Float

- The Total Float is the amount of time an activity may be delayed without delaying the end of a project,
 - An activity with Total Float may delay another activity,
 - May be displayed in a column and in the Gantt Chart, as per the thin black bar below and
 - May be negative.

Activity ID	Activity Name	Start	Finish	Total Float	Aug 31	Sep 07	Sep 14
◆ A1000	Start MS	01-Sep-14	01-Sep-14	0d			
■ A1010	Activity A	01-Sep-14	05-Sep-14	0d			
■ A1020	Activity B	08-Sep-14	12-Sep-14	0d			
■ A1030	Activity C	15-Sep-14	19-Sep-14	0d			
■ A1040	Activity D	01-Sep-14	02-Sep-14	11d			
■ A1050	Activity E	08-Sep-14	09-Sep-14	0d			
◆ A1060	Finish MS	19-Sep-14	19-Sep-14	0d			

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2.4.10 - Free Float

- The Free Float is the amount of time an activity may be delayed without delaying another activity,
 - Displayed only in a column and not as a bar, and
 - Is never in the negative.


Activity ID	Activity Name	Start	Finish	Total Float	Free Float	Aug 31	Sep 07	Sep 14
◆ A1000	Start MS	01-Sep-14	01-Sep-14	0d	0d			
■ A1010	Activity A	01-Sep-14	05-Sep-14	0d	0d			
■ A1020	Activity B	08-Sep-14	12-Sep-14	0d	0d			
■ A1030	Activity C	15-Sep-14	19-Sep-14	0d	0d			
■ A1040	Activity D	01-Sep-14	02-Sep-14	11d	3d			
■ A1050	Activity E	08-Sep-14	09-Sep-14	0d	0d			
◆ A1060	Finish MS	19-Sep-14	19-Sep-14	0d	0d			

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3.2 - Logging In

- The Administrator will provide you with:
 - A web "Address" to access the Primavera Web Access software Login screen, which may be different to the one below,
 - A Username and a Password,
 - Open the **Advanced** tab to select another database or to change the **Language**,
 - A database to log into that may be different to the one below,
 - Click onto the **Login** button:

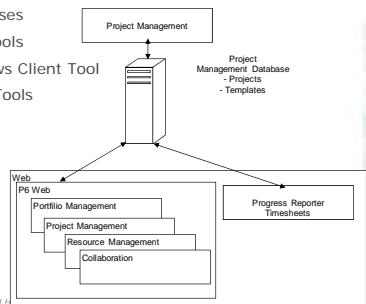


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3.3 - Primavera P6 Architecture

- Primavera P6 has the following core components:
 - Databases
 - Web Tools
 - Windows Client Tool
 - Other Tools




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3.4 - P6 Web Functionality Areas

- P6 Web has the following functionality areas:
 - Dashboards** - these display Portlets that may be customised by the user to display information relevant to the portfolios, projects and resources,
 - Portfolios** - this allows you to review information on groups of projects,
 - Projects** - this is where one or more projects may be created or opened and manipulated. This area will be covered in detail in this book,
 - Resources** - this is where resources are created and managed,
 - Administration** - where the User set the user preferences and Database Administrator administers users and the database.




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3.5 - Viewing Project Data

- This section will cover the viewing of project data found under the **Project** tab.

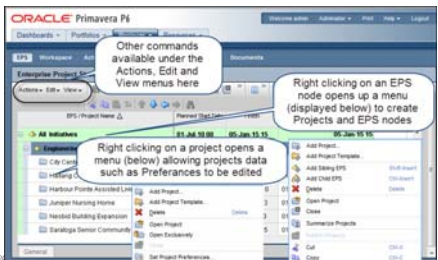


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3.5.1 - Projects, EPS Tab

- The **Projects, EPS** tab allows access to areas where:
 - EPS Nodes may be create and edited and
 - Projects may be create and
 - Project Preferences administered.



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3.5.2 Projects, Activities Tab

- The **Projects, Activities** tab allows access to areas where:
 - Projects may be opened using the **Open Projects** command
 - Enterprise Project Data** viewed, created and edited and
 - Project Scheduled Services** administered, out of scope of this book.



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4.7.1 - Project, EPS General Tab

- From the **Project, EPS, General** tab:
 - Highlight a project or EPS Node,
 - The project must be open to edit some project data,
 - You must also have the appropriate access rights to edit data,
 - Click on the **General** tab:

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4.7.2 - Project Preferences Form

- The project preference form is where other important project defaults are set and is accessed by selecting **Project, EPS, Set Project Preferences**:

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4.8 - Saving Additional Project and EPS Information – Notebook Topics

- Often additional information about a Project or EPS Node is required to be saved with the project such as location, client and type of project,
- This data may be saved in the **Project Details, Notebooks** tab:

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4 - CREATING A NEW PROJECT - SUMMARY

- 4.1 - Creating a Blank Project
- 4.2 - Copy an Existing Project
- 4.3 - Deleting a Project
- 4.4 - Using the Project Templates Function,
- 4.5 - Importing a Project
- 4.6 - Saving Project Information on Changing Windows
- 4.7 - Setting Up a New Project
- 4.8 - Saving Additional Project and EPS Information – Notebook Topics
- 4.9 - Workshop 2 – Creating Your Project.

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4.7 - Workshop 2 - Creating Your Project

Background

- You are an employee of Wilson International and are responsible for planning the Bid preparation required to ensure that a response to an RFQ (Request For Quote) from OzBuild Pty Ltd is submitted on time,
- While short-listed, you have been advised that the RFQ will be available on 02 December 2013 at 8:00hrs (8:00am) and you will be required to submit 3 bound copies of the proposal before 27 January 2014 at 16:00hrs (4:00pm).

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5 - DEFINING CALENDARS

- 5.1 - Database Default Calendar
- 5.2 - Accessing Global, Resource and Project Calendars
- 5.3 - The Project Default Project Calendar
- 5.4 - Creating a New Global Calendar
- 5.5 - Creating a New Project Calendar
- 5.6 - Shared Resource Calendar
- 5.7 - Administer, My Calendar
- 5.8 - Promote, Copy, Rename and Delete a Calendar
- 5.9 - Base Calendars
- 5.10 - Adjusting Calendar Working Hours
- 5.11 - Calendars for Calculating Project, WBS and Other Summary Durations
- 5.12 - Tips for Mixed Calendar Schedules
- 5.13 - Workshop 3 – Maintaining the Calendars.

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Simple Examples of WBS Structures

- The WBS for three buildings on one site may look like the pictures below:
- In which situations would each example be applicable?

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6.1 - Opening and Navigating the WBS

- The project must be open and the **Activities** window must be displayed,
- Ensure you have a view with a **WBS** icon beside it:

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6.2 - Creating and Deleting a WBS Node

- To create a new WBS Node select a **WBS Code or Name** and either:
 - Right-click to display the menu and use the menu commands **Add Child WBS** or **Add Sibling WBS**, or
 - Use the menu toolbar **Add Child WBS** icon,
- Then use the icons on the Move toolbar to put the WBS Nodes at the right level or to reorder them,
- The commands **Add**, **Delete**, **Copy**, **Cut** and **Paste** all work to create, delete, move, and copy WBS Nodes.

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6.3 - WBS Node Separator

- The Default WBS Node Separator is assigned in select **Administer, Application Settings, General** tab.

- Each individual project WBS Node separator may be defined from the **Projects** window, **Set Project Preferences...** form, **General** tab:

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6.4 - Activity Window Work Breakdown Structure Lower Pane

- The **Activity** window lower displays different tabs when a WBS Node is selected to when an activity is selected,
- The tabs may be hidden or displayed by left clicking on a tab to open a menu:

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6.5 - WBS Categories

- WBS Nodes may be assigned categories, which enable WBS Nodes within an EPS to be grouped and sorted in different ways,
- Create WBS Categories by selecting **Administer, Enterprise Data, Projects WBS Categories**,
- WBS Categories are assigned to and removed from WBS Nodes by inserting the **WBS Categories** column into the General tab:

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7.11 - Reordering or Sorting Activities

- There are two principal methods of ordering activities after they have been added:
 - Using the **Sort** function in the **Customize Activity View** form, or
 - Highlighting a column title and clicking with the mouse.

WBS / Activity	Activity ID	Start	Finish
Bid for Facility Extension			
Technical Specification			
Approval to Bid	OZ1000	02-Dec-	
Determine Installation R...	OZ1010	02-Dec-	
Create Technical Specif...	OZ1020	08-Dec-	
Identify Supplier Compo...	OZ1030	13-Dec-	
Validate Technical Spec...	OZ1040	17-Dec-13 08	18-Dec-13 16

Arrow showing order of activities

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7.12 - Undo

- There is no undo as in the Professional or Optional Client.

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7.13 - Summarizing Activities Using WBS

- The WBS bands may be summarized in the same way as in other project planning and scheduling software,
- WBS Nodes may be summarized or expanded by:
 - Double-clicking any WBS band description. The band will either roll up when expanded or expand when rolled up,
 - Clicking on the **Expand All** and **Collapse All** icons that will either display all activities or roll up the project to one bar, which is usually not very useful,
 - WBS Nodes may be reordered by clicking the **Move** icons on the **Move** toolbar.

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7.14 - Spell Check

- There is no spell check as in the Client, you could export to Excel and spell check there.

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7 - ADDING ACTIVITIES AND ORGANIZING UNDER THE WBS - SUMMARY

- 7.1 - New Activity Defaults
- 7.2 - Adding New Activities
- 7.3 - Default Activity Duration
- 7.4 - Copying Activities from other Programs
- 7.5 - Copying Activities in P6
- 7.6 - Elapsed Durations
- 7.7 - Finding the Bars in the Gantt Chart
- 7.8 - Activity Window – Bottom Pane
- 7.9 - Assigning Calendars to Activities
- 7.10 - Assigning Activities to a WBS Node

continued...

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7 - ADDING ACTIVITIES AND ORGANIZING UNDER THE WBS - SUMMARY

- 7.11 - Reordering or Sorting Activities
- 7.12 - Undo
- 7.13 - Summarizing Activities Using WBS
- 7.14 - Spell Check.

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9.7 - Circular Relationships

- A **Circular Relationship** is created when a loop is created in the logic.
- When you reschedule you will be presented with the **Error** form, which identifies there is a problem in the logic, but not specifically identifies a loop.

- If an error is detected when scheduling a project, the **Schedule Project Log** report should be displayed which will identify any problems:

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9.8 - Scheduling the Project

- After you have your activities and the logic in place, Primavera calculates the activities' dates/times.
- More specifically, Primavera **Schedules** the project to calculate the **Early Dates**, **Late Dates**, **Free Float** and the **Total Float**.
- This will enable you to review the **Critical Path** of the project. (Microsoft Project uses the term **Slack** instead of the term **Float**).
- Press F9 or click on the **Scheduler** icon to open the **Schedule Project** form:

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9 - ADDING RELATIONSHIPS-SUMMARY

- 9.1 - Constraints
- 9.2 - Understanding Relationships
- 9.3 - Understanding Lags and Leads
- 9.4 - Formatting the Relationships
- 9.5 - Adding or Removing Relationships
- 9.6 - Dissolving Activities
- 9.7 - Circular Relationships
- 9.8 - Scheduling the Project.

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9.9 - Workshop 7 – Adding the Relationships

- You have determined the logical sequence of activities, so you may now create the relationships.

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10 - ACTIVITY NETWORK VIEW

- 10.1 – Introduction to the Activity Network View
- 10.2 - Early Date, Late Date and Float Calculations
- 10.3 - Workshop 8 – Scheduling Calculations and Activity Network View.

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10.1 - Introduction to the Activity Network View

- The **Activity Network**, also known as the **PERT View**, displays activities as boxes connected by the relationship lines:

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12.3.3 - Custom Header and Custom Footer Tabs

- The Custom Header & Custom Footer tabs operate in the same way,
- The instructor will demonstrate how the icons operate:

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12.3.4 - Sheet Tab

- Print Range**
 - Selecting a **Specific date range** will enable parts of the schedule to be printed,
 - Fit to:**,
- Table,**
 - Print ? Table columns,**
 - Scale,**
 - Print table on all pages,**
- Page Order.**

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12.4 - Reports

- Reports are run from the dashboard and are not part of this book:

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12.5 - Other Primavera Reporting Options

- There are several other several other tools available from Oracle that may be used generate Primavera reports,
- These include P6 Analytics and BI Publisher which are not covered in this course.

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12 - PRINTING AND REPORTS - SUMMARY

- 12.1 - Printing the Gantt Chart
- 12.2 - Print Preview
- 12.3 - Page Setup
- 12.4 - Reports
- 12.5 - Other Primavera Reporting Options.

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12.6 - Workshop 12 - Printing

- We want to issue a report for comment by management and will set up our Headers and Footers.

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13.2.7 - When scheduling progressed activities use

- There are three options for calculating the finish date of the successor when the successor activity has started before the predecessor activity is finished,
- The selected option is applied to all activities in a schedule when it is calculated,
- Open the **Schedule Options** form, **General** tab by selecting **Scheduler** and clicking on the, **Options** icon where the options are found under **When scheduling progressed activities use:**

When scheduling progressed activities use

Retained Logic
 Progress Override
 Actual Dates

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Retained Logic

- The relationship is maintained between the predecessor and successor for the unworked portion of the activity (the Remaining Duration) and continued after the predecessor has finished,
- The picture below represents the status of the activities before updating the schedule:

- After updating the relationship forms part of the critical path and the predecessor has no float:

- The Windows Client picture is clearer:

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Progress Override

- In the following example, the Finish-to-Start relationship between the predecessor and successor is disregarded, and the unworked portion of the activity (the Remaining Duration) continues before the predecessor has finished,

- The relationship is not a driving relationship and DOES NOT form part of the critical path in the example following. The predecessor in the example has float.

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Actual Dates

- This function operates when there is an activity with Actual Dates in the future, which is not logical,
- With this option the remaining duration of an in-progress activity is calculated after the activity with actuals,
- The pictures below is with **Retained Logic:**

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Actual Dates

- This function operates when there is an activity with Actual Dates in the future, which is not logical,
- With this option the remaining duration of an in-progress activity is calculated after the activity with actuals,
- The picture below is with **Progress Override:**

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Actual Dates

- This function operates when there is an activity with Actual Dates in the future, which is not logical
- The remaining duration of an in-progress activity is calculated after the activity with actuals,
- The pictures below is with **Actual Dates** and the Remaining Duration is scheduled after the completion of the activity in the future:

- The Windows Client picture is clearer :

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14.5 - Suspend and Resume

- **Suspend** and **Resume** dates enables the work to be suspended and the activity resumed at a later date,
- Display the **Suspend** and **Resume** date columns,

Actual Start	Suspend Date	Resume Date	Finish
22-Aug-16 08	25-Aug-16 16	01-Sep-16 08	06-Sep-16 16

- **NOTE:** This enables only one break in an activity, the **Suspend** in the past and **Resume** in the future.

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14.6 - Scheduling the Project

- At any time, but usually after some or all the activities have been updated, the project is scheduled:
- Open the **Schedule Project** form by either:
 - Select **Scheduler (F9)** icon or
 - Press the **F9** key,
- Select the revised **Current Data Date and Time** from the **Data Date** box and click the **Schedule** button.
- The software will recalculate all the early finish dates from the remaining durations and the new **Current Data Date**, taking into account the relationships and the **Schedule Options**.

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14.7 – Update Project

- There is no **Update Project** function as found in the Windows Client.

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14.8 - Comparing Progress with Baseline

- You may view any variance using bars or columns:

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14.9 - Progress Line Display on the Gantt Chart

- A progress line displays how far ahead or behind activities are in relation to the Baseline,
- Either the **Project Baseline** or the **Primary User Baseline** may be used and there are four options,
- The **Progress Line** is formatted in the **Customize Activity View** form, **Gantt Chart** tab:

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14.9 - Corrective Action

- Suggested solutions to bring the project back on track include:
 - Reducing the durations of activities on, or near, the critical path,
 - Providing more work time and changing calendars,
 - Reducing the project scope and deleting activities,
 - Changing activity relationships so activities take place concurrently,
 - Changing the plan and therefore changing the logic to reduce the overall length of the critical path.

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17 - ASSIGNING ROLES, RESOURCES AND EXPENSES

- 17.10 - Resource, Planning Window
- 17.11 - Expenses
- 17.12 - Suggested Setup for Creating a Resourced Schedule
- 17.13 - Workshop 14 – Assigning Resources and Expenses to Activities.

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17.1 - Understanding Resources

- During the planning stage, **Roles** may be assigned to Activities to gain an understanding of the long-term resource demand,
- Roles** are later replaced by a **Resource** when it is known who will be undertaking the work,
- If you are not using named resources then you should consider not using Roles, as Resources have more functionality than Roles,
- A **Resource** may be assigned:
 - Directly to an Activity, or
 - To a Role which has been assigned to an Activity.

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17.2 - Understanding Resource Calculations and Terminology

- A Resource has three principal components after it has been assigned to an Activity:
 - Quantity**, in terms of **Work** in hours or days or **Material** quantities required to complete the activity, which are referred to as **Units** by Primavera,
 - The **Resource Unit Rate** is termed **Price/Unit** in Primavera and
 - Cost**, which is calculated from the **Resource Unit Rate x Units**.

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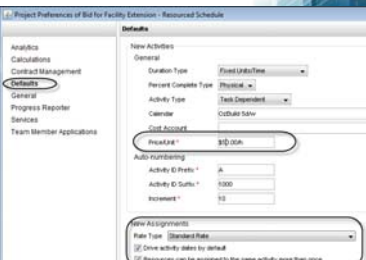
- Each Resource and Expense has the same four fields for **Costs and Units: Budget, Remaining, Actual and At Completion**,
- When an activity is **Not Started** then:
 - Budget** may be linked to **Remaining** and **At Completion** and therefore a change to one will change the other two and they will always be equal, and
 - Actual** will be zero,
- When the activity is marked **Started** and would normally be **In-Progress** and the % Complete is between 0.1% and 99.9% then:
 - Budget** becomes unlinked from **Remaining** and **At Completion**, and
 - At Completion = Actual + Remaining** and have a link to % Complete,
- When the activity is **Complete** and the % Complete is 100% then:
 - Remaining** is set to zero, and
 - At Completion = Actual**.

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17.3 - Project Preferences Form, Resource Defaults

- Preferences and defaults (which may be changed for each resource assignment) affect how all resources in a project are calculated are set in the **Project Preferences** form and pertain to all activities and resources,
- These settings must be understood:

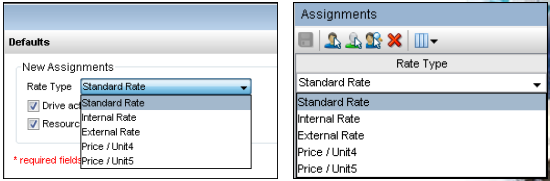


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17.3.1 - Rate Type

- There are five **Resource Rates** available in Primavera
- One rate may be set as a project default,
- After assignment to an activity, the Resource Rate may be changed using the Rate Type field in the **Assignments** tab of the **Activities Window**.



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17.3.2 - Resources can be assigned to the same activity more than once

- This is useful if it is required to assign a resource at the beginning of an activity and later at the end of an activity with a lag.
- For example, one may want to assign a crane on the first day of the activity to assist in erecting and one the last day to assist in dismantling. This check box needs to be checked for a resource to be assigned twice to an activity.
- NOTE:** The Web Client does not allow the assignment of a resource lag, but resources may be set up here for use in the Windows Client.

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17.3.3 - Understanding Resource Option to Drive Activity Dates By Default

- A resource has the following fields:
 - Planned Duration.** The duration that a resource is working.
 - Start.** The date the resource starts work, and
 - Finish.** This date is calculated by the addition of the Activity Start Date + the Planned Duration.
- When the Drive Activity Dates option is switched off it is possible for a resource to calculate outside the activity duration:

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17.3.4 - Price/Unit

- This rate is also used to calculate the resource costs when an activity is not assigned roles or resources but is assigned a quantity in the **Activities** lower pane, **General** tab:

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17.3.5 - Activity Types

There are six Activity Types assigned in the General tab in the Activities Window:

- Task** – Ignores Resource Calendars
- Start Milestone** – MAY NOT BE ASSIGNED RESOURCES
- Finish Milestone** – MAY NOT BE ASSIGNED RESOURCES
- Resource Dependent** – Acknowledges Resources calendars
- Level of Effort (LOE)**
- WBS Summary Activity**

NOTE: All activity types may be assigned Expenses.

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Activity Types continued

- Start Milestone** in the Windows Client have a blank Finish Date,
- Finish Milestone** in the Windows Client have a blank Start Date:

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Activity Types continued

- Level of Effort (LOE)** may have several relationship types:

- WBS Summary Activity**, spans activities in a WBS:

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17 - ASSIGNING ROLES, RESOURCES AND EXPENSES - SUMMARY

- 17.10 - Resource, Planning Window
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17.13 - Workshop 14 – Assigning Resources and Expenses to Activities

- The Resources must now be assigned to their specific activities.

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18 - RESOURCE OPTIMIZATION START HERE

- 18.1 - Reviewing Resource Loading
- 18.2 - Methods of Resolving Resource Peaks and Conflicts
- 18.3 - Workshop 15 – Resources Optimization

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18.1 - Reviewing Resource Loading

- There are a number of facilities for reviewing resource loading which consist of either displaying a View or running a report. The Timescale interval affects the displays. Views will not be covered in detail, as they are self-explanatory.
- It is important that the data to be reviewed is **Summarized** before any resource analysis is undertaken by setting a **Projects, Project Scheduled Service** or by running the **Projects, EPS, Summarize Projects**,
- The instructor will lead you through the:
 - Resource Usage Window** and
 - Resource Analysis Window**.

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18.2 - Methods of Resolving Resource Peaks and Conflicts

Methods of resolving resource overload problems are:

- Revising the Project Plan,
- Duration Change,
- Resource Substitution,
- Increase Working Time,
- Split an activity around peaks in demand,
- Leveling the schedule,
- Resource Curves.

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18 - RESOURCE OPTIMIZATION - SUMMARY

- 18.1 - Reviewing Resource Loading
- 18.2 - Methods of Resolving Resource Peaks and Conflicts

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20 - OTHER METHODS OF ORGANIZING PROJECT DATA

- 20.1 - Understanding Project Breakdown Structures
- 20.2 - Activity Codes
- 20.3 - User Defined Fields
- 20.4 - Workshop 17 – Activity Codes and User Defined Fields (UDF)

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20.1 - Understanding Project Breakdown Structures

The **Work Breakdown Structure – WBS** function was discussed earlier as a method of organizing projects and activities under hierarchical structures.

There are alternative features available in Primavera for grouping, sorting and filtering activities, resources, and project information:

- Activity Codes
- User Defined Fields (UDF)
- WBS Categories – not covered
- Resource Codes – not covered
- Cost Accounts – not covered.

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20.2 - Activity Codes

Activity Codes may be used to Group, Sort, and Filter activities from one or more open projects,

- Activity Codes**, such as Phases, Trades, or Disciplines, are often defined in the **Activity Codes Definition** form,
- Activity Code Values** are defined in the in the **Administer, Enterprise Data, Activities, Activity Codes** tabs, such as:
 - Phases of Design, Procure, Install and Test,
 - Trades of Brickwork, Plumbing and Electrical, and
 - Disciplines of Concrete, Mechanical, Pipework,
- Activity Codes** are assigned from the **Activities Window** using the **Codes** tab in the lower pane or displaying the appropriate Activity Code column,

The instructor will demonstrate.

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20.3 - User Defined Fields

- User Defined Fields are similar to Custom Data Items in P3 or Custom Fields in Microsoft Project and provide the ability to assign additional information to database records,
- They may be used for recording information about the data field as an alternative to Activity Codes and other predefined Primavera fields,
- The type of data that may be assigned to User Defined Fields would be equipment number, order number, variation or scope number; road, railway or pipeline changes; address and additional costs data,

continued...

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User Defined Fields

- Activity data may be filtered, grouped, and sorted using these User Defined Fields in a similar way to Activity Codes,
- Data may be imported into the fields and, unlike Activity Codes, the data item does not have to exist in the database before importing,
- There are a number of predefined fields that may be renamed and new ones may be created.,
- The instructor will demonstrate UDFs.

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20 - OTHER METHODS OF ORGANIZING PROJECT DATA - SUMMARY

- 20.1 - Understanding Project Breakdown Structures
- 20.2 - Activity Codes
- 20.3 - User Defined Fields.

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20.4 - Workshop 17 – Activity Codes and User Defined Fields (UDF)

- This workshop will look at creating an Activity Code and some UDFs,
- We will create an activity code to represent the departments' responsibilities for the Project.

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Review Expectations

- Any questions,
- Complete Feedback Sheet,
- Have we met your expectations?

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Database Cleanup at end of course, if required:

Please could you delete all:

- User Filters
- User Layouts
- The resources created but NOT your Resource node
- Your projects.

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Thank you for attending

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