



**Hewlett Packard**  
Enterprise

# **Integrating HPE PPM with Microsoft Project**

Version: 2.0

Release Date: April 2017

# Contents

1	Introduction .....	3
2	A Few Words about the Integration Approaches .....	3
3	How the Integration Works .....	3
3.1	Project-to-project Association .....	4
3.2	High Level Data Map .....	4
3.3	Synchronization Modes Explained.....	7
3.3.1	Information Specific to Either PPM or Microsoft Project .....	7
3.3.2	Information Shared in Common by PPM and Microsoft Project .....	7
3.3.3	PPM Linked Tasks Information (Hybrid Projects Only).....	8
3.3.4	How Synchronization Modes Treat Categories of Information .....	8
4	Choosing the Right Synchronization Mode .....	9
4.1	Plan a New PPM Project Based on a Previous Microsoft Project Plan .....	9
4.2	Gradual Conversion - Display Active Projects in the PPM Dashboard .....	9
4.3	Convert Active Projects from Microsoft Project to PPM.....	10
4.4	Augment Microsoft Project with the PPM Dashboard.....	10
4.5	Augment Microsoft Project by Collecting Simple Actuals with PPM .....	11
4.6	Augment Microsoft Project by Collecting Complex Actuals with PPM.....	11
5	Tracking Project Actuals through the Integration .....	13
5.1	Factors in Tracking Actuals .....	13
5.1.1	Progress Reporting .....	13
5.1.2	Understanding the Metrics .....	13
5.1.3	Partial Actuals Information .....	13
5.1.4	Interpreting Actuals Information .....	13
5.1.5	Recommendation .....	14
5.2	Actuals Synchronization Options (from PPM to Microsoft Project) .....	14
5.2.1	Percent Complete .....	14
5.2.2	Percent Complete and Actual Dates.....	14
5.2.3	Actual Efforts.....	15
6	Answers to Frequently Asked Questions .....	16
6.1	General.....	16
6.1.1	How does PPM generate or modify the MPP files? .....	16
6.1.2	Can we modify the template MPP file? .....	16
6.1.3	Does the work plan synchronization update PPM or Microsoft Project custom fields? .....	16
6.1.4	Does the interface update PPM or Microsoft Project task notes? .....	16
6.1.5	Can I change my synchronization mode once I've assigned it to a project? .....	17
6.2	How is PPM information synchronized into Microsoft Project.....	17
6.2.1	How are external dependencies synchronized? .....	17
6.2.2	How are PPM scheduling constraints synchronized?.....	17
6.2.3	Are all types of PPM references allowed? .....	17
6.2.4	How are cancelled or bypassed PPM tasks synchronized? .....	17
6.2.5	How can an unscheduled PPM project be synchronized to Microsoft Project? .....	18
6.2.6	Why are the scheduled dates in Microsoft Project sometimes different than in PPM? .....	18
6.2.7	Are PPM resource calendars synchronized?.....	19
6.2.8	How are Microsoft Project resource units for task assignments determined during synchronization? .....	19
6.3	How is Microsoft Project information synchronized into PPM.....	19
6.3.1	Are Microsoft Project resource calendars and cost rates synchronized? .....	19
6.3.2	Are Microsoft Project resource units synchronized?.....	20
6.3.3	Are Microsoft Project baseline dates synchronized? .....	20
6.3.4	How are Microsoft Project predecessor relationships synchronized? .....	20
6.3.5	How are Microsoft Project scheduling constraints synchronized?.....	20
6.3.6	How are split tasks synchronized?.....	20
6.3.7	How does the integration work with Microsoft Project resource leveling?.....	21
6.3.8	How are lag or lead offsets on Microsoft Project predecessor relationships synchronized?.....	21

6.3.9	Are Microsoft Project work contours or delayed assignments synchronized?.....	21
6.3.10	Will the synchronization affect my macros and VB scripts? .....	21
6.3.11	What happens when a user deletes a task in Microsoft Project which has actuals in PPM? .....	21
6.4	Troubleshooting.....	21
6.4.1	How will synchronizing a Microsoft Project file change the project? .....	22
6.4.2	How does cutting and pasting affect the synchronization process? .....	22
6.4.3	How is an unsatisfied finish-to-finish request predecessor synchronized? .....	22
6.4.4	How are Blocking and finish-to-finish request predecessors handled during synchronization? .....	22
6.4.5	Why isn't Microsoft Project calculating roll-up values? .....	23
6.4.6	Why does synchronizing actuals change the scheduled dates in Microsoft Project? .....	23
6.4.7	How can I synchronize a Microsoft project in a SQL Server database?.....	23
6.4.8	Why are the actual durations of some task groups not synchronized into PPM? .....	23
6.4.9	Why is the Microsoft Project start date of a task group sometimes later than some tasks? .....	24
6.4.10	Why does synchronizing an estimated finish date from PPM create a constraint? .....	24
6.4.11	Can I automatically create PPM user accounts for unmatched resources? .....	24
6.4.12	How is task duration recalculated when a Microsoft Project plan is synchronized?.....	24
6.4.13	Why aren't my dependencies between projects preserved when synchronizing with Microsoft Project? .....	25
6.4.14	Why aren't my Major Milestones showing up in Microsoft Project after synchronization? .....	25

# 1 Introduction

HPE Project and Portfolio Management (PPM) provides enterprise level project management capability, including visibility into multiple projects, staffing profiles, resource-project breakdowns, time management, and a strict process-oriented approach to managing projects. It also integrates with agile tools such as Jira, ALM Octane and CA Agile Central to provide central management and tracking capabilities of your agile projects by bringing agile project execution information into the PPM work plans.

The integration between PPM and Microsoft Project allows the benefits of both applications to work in concert. You may prefer to use Microsoft Project to create or update work plans if you are more familiar with it. The integration provides you with the ability to leverage your experience to get projects up and running swiftly in Microsoft Project while using PPM's collective capabilities, such as time and resource management or agile tools integration, to ensure process control and visibility across projects and across the enterprise.

This paper describes the built-in capabilities of PPM 9.41 to integrate with Microsoft Project Standard or Professional, version 2007 and later. Complementary to the standard product documentation, this paper helps Project Managers gain a more detailed understanding of the integration process. Major topics include an overview of how the MPP file integration mode works, how to select an appropriate synchronization mode, and answers to frequently asked questions (FAQ) about integrating PPM with Microsoft Project.

This paper assumes that readers have a good understanding of both PPM and Microsoft Project. Before reading this paper, please familiarize yourself with the standard product documentation on the integration process, found in the "Integrating Project Management with Microsoft Project" chapter of the HPE PPM Project Management User Guide. Topics such as system requirements and setup steps are covered in the chapter. If you are a newcomer to Microsoft Project, you will also want to review introductory documentation on Microsoft Project.

## 2 A Few Words about the Integration Approaches

Up until PPM 9.41, the only way to integrate PPM with Microsoft Project was to use the PPM Plugin for Microsoft Project. In PPM 9.41, a new way has been introduced for the integration. This new approach is based on downloading and uploading MPP files of work plans in PPM.

Even though there is no short term plan to remove the PPM Plugin for Microsoft Project, we do plan not to implement new features on the plugin. The new integration described in this document is the preferred integration onwards and should be preferred whenever possible over the plugin.

## 3 How the Integration Works

To provide an understanding of the basics of the integration process between PPM and Microsoft Project, the following sections describe:

- How projects in one application are synchronized with projects in the other application ([Project-to-project Association](#))
- Mapping of fields between the two applications ([High Level Data Map](#))
- Different synchronization modes used during integration ([Synchronization Modes Explained](#))

### 3.1 Project-to-project Association

Each PPM project can be associated with a particular Microsoft Project file throughout the project life cycle. This association starts when one project is used to create the other project. This can happen in either direction - a Microsoft Project file can be imported into PPM as the work plan of a PPM project, or a PPM project work plan can be exported into a new Microsoft Project file. The Project Manager periodically brings the association up to date by synchronizing the two projects with each other.

At this high level, the integration is similar to using DropBox to synchronize local files on a laptop computer with the reference copies on the cloud. Only PPM keeps track of which MPP file is synchronized with a PPM project, and stores a copy of this file on the PPM server. No specific change is done to the MPP file synchronized to PPM, until the file is downloaded from PPM, at which point PPM may update some of the task fields to reflect the latest work plan information in PPM.

Note that this is a one-to-one association. Since PPM is a distributed application (as opposed to a desktop application like Microsoft Project), there are some subtleties to this relationship. Each PPM project can be associated with a particular Microsoft Project file. This file can be located anywhere (on the local hard drive, on a shared network drive, on a SharePoint site, etc.), but there is always a specific Microsoft Project filename associated with each PPM project.

The association information only exists in PPM server. There is no information stored in an MPP file downloaded from PPM that could let you know which PPM Project the MPP file is associated with.

### 3.2 High Level Data Map

[Table 1](#) provides a high-level summary of the way in which the integration maps information between projects in the two applications. The PPM field names are shown with their corresponding field names in Microsoft Project. Any additional information that would be useful to a Project Manager, especially about the treatment of project actuals by Microsoft Project, is included in the Notes column of the table. See [Tracking Project Actuals through the Integration](#) for more information about project actuals.

**Table 1 Mapping fields between PPM and Microsoft Project**

PPM field	Microsoft Project field	Notes
<b>Planning Information</b>		
Task name	Task name	
Resources	Resources	Microsoft Project resource names are matched with PPM user accounts, based on username, email address or PPM user full name (First name + Last Name).
Predecessors	Predecessors	For all predecessor relationships.
External Predecessors*	Custom Text Field	When downloading an MPP file from PPM, you can insert the information about the task's external predecessors (i.e. the tasks from other projects that this task depends on) in a Microsoft Project custom Text field.
External Successors*	Custom Text Field	When downloading an MPP file from PPM, you can insert the information about the task's external successors (i.e. the tasks from other projects that depend on this task) in a Microsoft Project custom Text field.
Constraint type/date	Constraint type/date	For the constraint types supported by both applications.
Scheduled Start	Start	
Scheduled Finish	Finish	
Scheduled Duration	Duration	Microsoft Project recalculates to make sure the start/finish/duration are in sync, but duration is not always changed. For example, if the task is "fix duration", only the start/finish dates are changed.
Scheduled Effort	Work	Days of scheduled effort are converted to hours of work using the Microsoft Project setting for "Hours per day" in Tools-Options-Calendar.
Scheduled Effort/Resource Assignment	Work/Resource Assignment	For tasks with more than one assigned resource, the portion of the effort (work) assigned to each resource is synchronized when the project is in Microsoft Project controlled mode.
Milestones	Milestones	Milestones received from Microsoft Project must be manually set to 100% complete.

		Milestones sent from PPM behave normally in Microsoft Project.
User Data Field (Text)	Baseline Start*	Microsoft Project Baseline Start date can be inserted in a PPM user data field in the format of yyyy-mm-dd.
User Data Field (Text)	Baseline Finish*	Microsoft Project Baseline Finish date can be inserted in a PPM user data field in the format of yyyy-mm-dd.
User Data Field (Text)	Baseline Duration*	Microsoft Project Baseline Duration (in days) can be saved in a PPM user data field.
User Data Field (Text)	Baseline Work*	Microsoft Project Baseline Duration (in hours) can be saved in a PPM user data field.
<b>Actuals Information</b>		
Percent Complete	Percent Complete	Microsoft Project is configured by default to equate Percent Complete with Percent Work Complete.
Actual Start	Actual Start	Microsoft Project defaults Start to Actual Start when this date is known.
Actual Finish	Actual Finish	Microsoft Project defaults Finish to Actual Finish when this date is known.
Actual Duration	Actual Duration	Microsoft Project recalculates Actual Duration from the Actual Start and Actual Finish dates.
Actual Effort	Actual Work	When any effort metric is tracked in PPM, the default link in Microsoft Project between Percent Complete and Percent Work Complete is disabled.
Estimated Finish	Finish	Microsoft Project does not track Estimated Finish as a distinct field from the scheduled Finish. The Baseline feature can be used to capture the original Finish date for variance reporting purposes.
Estimated Remaining Duration	Remaining Duration	
Estimated Remaining Effort	Remaining Work	
User Data Field (Text)	Custom Text Field	Both Microsoft Project and PPM have special fields for user specified task information. PPM can define a map between a subset of these user defined fields to use in synchronization.

Activity	Custom Text Field	Microsoft Project does not have an Activity field. This field in PPM can be mapped and synched to a custom field in Microsoft Project
Notes	Notes (for tasks)	Notes can be synchronized between PPM and Microsoft Project, but only in one direction.

*Note: Fields with a \* can only be synchronized using the new MPP-file integration. They are not synchronized if using the PPM Plugin for Microsoft Project.*

### 3.3 Synchronization Modes Explained

When the Project Manager performs a synchronization, information in the PPM project is used to bring the Microsoft Project up to date, and vice versa. But what information is used, and how? The answer depends on the synchronization mode selected for that PPM project.

To understand what a synchronization mode means, we need to understand the way that the integration categorizes project information. This is because the synchronization mode determines what will happen to each category of information during the synchronization. The integration classifies project information into four categories. A summary of how each synchronization mode treat different categories of information is provided in [Table 2](#).

#### 3.3.1 Information Specific to Either PPM or Microsoft Project

The first two categories are information that is distinct to either PPM or Microsoft Project. For instance, a task in PPM can contain references to other PPM information, such as requests and packages. There is no equivalent type of such information in Microsoft Project. Conversely, the resource cost rates in a Microsoft Project file have a different definition and concept from those in PPM.

All synchronization modes treat these two categories of information in the same way: the information is not altered. If the information existed prior to a synchronization, then the synchronization will not change or delete the information. The exception to this rule is when a task is deleted during the synchronization. In that case, all information associated specifically with that task will be deleted.

#### 3.3.2 Information Shared in Common by PPM and Microsoft Project

The remaining categories are information that is tracked by both applications. These are project planning information and project actuals information. This shared information is handled differently depending on the synchronization mode selected.

The project planning information is the information determined before work begins on a task. This category includes the names, sequences, and levels of indenture of tasks (the work breakdown structure.) Planning information also includes the assigned resources, scheduled start and finish dates, scheduling constraints, scheduled durations, and scheduled effort.

Project actuals information is the collection of metrics detailing how much time and effort are actually required to complete tasks. This category includes actual start and finish dates, actual durations, and actual effort. Actuals information also includes related estimated total and estimated remaining values: percent complete, estimated finish dates, estimated effort remaining, etc.



### 3.3.3 PPM Linked Tasks Information (Hybrid Projects Only)

If your PPM project is a hybrid project, some task can be mapped to external projects (it can be another PPM project or some tasks from an agile tool such as Jira or ALM Octane). These tasks (called “linked tasks”) will always have their scheduling information and children tasks controlled by PPM, even when synchronized from Microsoft Project. The only task field that can be edited in Microsoft Project and synchronized to PPM is the linked tasks’ names.

### 3.3.4 How Synchronization Modes Treat Categories of Information

[Table 2](#) summarizes how each category of information is treated during the synchronization. The “Integrating HPE PPM Project Management with Microsoft Project” chapter of the *Project Management User Guide* explains in detail how the PPM interface changes, depending on the synchronization mode, to support the flow of information between the two projects.

**Table 2 How Synchronization Modes treat Categories of Information**

	<b>PPM controls all shared workplan information (PPM-control mode)</b>	<b>Control is shared (Shared control mode)</b>	<b>Microsoft Project controls all shared workplan information (MSP-control mode)</b>
<b>Information in PPM only</b>	Not altered	Not altered	Not altered
<b>Information in Microsoft Project only</b>	Not altered	Not altered	Not altered
<b>Planning information</b>	PPM information is used to update Microsoft Project	Microsoft Project information is used to update PPM	Microsoft Project information is used to update PPM
<b>Actuals information</b>	PPM information is used to update Microsoft Project	PPM information is used to update Microsoft Project	Microsoft Project information is used to update PPM
<b>Linked tasks information in PPM</b>	Not altered	Names of linked tasks can be updated.	Names of linked tasks can be updated.
<b>Linked tasks information in Microsoft Project</b>	PPM information is used to update Microsoft Project	PPM information is used to update Microsoft Project (except task name)	PPM information is used to update Microsoft Project (except task name)

## 4 Choosing the Right Synchronization Mode

Not all Project Managers want to use PPM and Microsoft Project together in the same way. The integration process offers a choice of three synchronization modes.

Each PPM project can have a different synchronization mode. This allows each Project Manager to use the interface differently, or even a single Project Manager to manage two projects differently.

On the other hand, there are benefits to an organization from standardizing the use of synchronization modes. For instance, if all projects are synchronized with Microsoft Project in the same manner, external stakeholders can have the same expectations about the timeliness of the project information presented in the PPM Dashboard.

In general, if you prefer to use Microsoft Project for project planning, either the “Microsoft Project controls all shared workplan information” or “Control is shared” setting should be used. If you prefer Microsoft Project, but Time Management needs to be used, then the “Control is shared” mode is recommended. Otherwise, the “PPM controls all shared workplan information” is the recommended choice of mode.

The following examples illustrate different methods of integrating the two applications with different synchronization modes, depending on the strategy adopted by the Project Manager.

### 4.1 Plan a New PPM Project Based on a Previous Microsoft Project Plan

A Project Manager who is planning a new project may want to create the plan using PPM, but to use a previous Microsoft Project plan as a starting point. The Project Manager can import this old Microsoft Project file in the new PPM project as long as it doesn't already have a work plan. When opening the project, the Project Manager should select the “PPM controls all shared workplan information” synchronization mode since all subsequent project planning will be performed inside PPM. The new PPM project will be placed in the “In Planning” state, and the Project Manager can rework the project as desired.

Planning the project in PPM gives the Project Manager an opportunity to become familiar with the PPM features that will be new to him or her, such as task states and references from tasks to Demand Management requests. If the Project Manager wants to see or present the project in the familiar Microsoft Project views, the modified plan can be exported to an MPP file (Microsoft Project format) from the project work plan or Project Overview page.

### 4.2 Gradual Conversion - Display Active Projects in the PPM Dashboard

For an active project, the Project Manager may want to make a gradual transition to PPM. This is usually the best choice if the stakeholders and participants are not yet familiar with PPM. When opening the project, the Project Manager will select the “Microsoft Project controls all shared workplan information” synchronization mode. This means that the project plan will be presented to stakeholders and participants in the PPM Dashboard, but PPM will not allow the project plan or actuals to be directly modified in PPM.

During the initial synchronization, the Project Manager will be notified of any synchronization errors through a pop-up screen.

The integration attempts to match Microsoft Project resource names with PPM users in three different ways. The order of precedence of resource mapping is username and email address, then full name in

“First Last” order, and finally full name in “Last First” order. (Note that Microsoft Project does not allow resource names containing the comma character.)

This order of precedence means, for instance, that when a resource name matches a PPM user by username, the interface does not attempt to match the resource name with a PPM user by full name.

Upon the first synchronization, or when a new resource is added to Microsoft Project, a resource mapping dialogue will be presented to the Project Manager. This dialogue will show all the automatic resource mappings between PPM and Microsoft Project based on the criteria described above, and will provide an opportunity to confirm these mappings. The dialogue also allows the creation of resource mappings for resources that PPM was not able to assign automatically, and also the ability to modify any automatic resource mappings if that is desired. This dialogue will not be available for projects in the “PPM controls all shared workplan information”, as all PPM resources will be inserted in a new MPP file every time it is downloaded from PPM.

This is also a good opportunity to familiarize participants and stakeholders with the presentation of the project in the PPM Dashboard, and to make any desired adjustments to the configuration of the PPM project. The Project Manager can synchronize the project as often as required to bring PPM up to date with changes made in Microsoft Project. The Project Manager can also change the synchronization mode to one of the other available modes. The other synchronization modes are discussed in the following sections.

### **4.3 Convert Active Projects from Microsoft Project to PPM**

If stakeholders and participants are familiar with PPM, the Project Manager can transition all project planning and tracking to PPM. The Project Manager can also decide to transition only the tracking of actuals to PPM.

To transition the tracking of actuals to PPM, the Project Manager will select the “Control is shared” synchronization mode. This means that project participants, in addition to seeing their task assignments, can enter actuals for these tasks using PPM. PPM will not allow the project plan (structure, schedule dates, etc.) to be modified through the PPM interface.

A project manager who is managing a project using the “Control is shared” synchronization mode for the first time will want to collect only a few actuals. Collecting only a few fields mitigates the risk of mistakes while the Project Manager and resources are becoming familiar with both the integration and a new way of tracking project work in real time.

The Project Manager may instead choose to transition all activities (both planning and tracking of actuals) into PPM immediately. In this case, the Project Manager will open the project using the “PPM controls all shared workplan information” synchronization mode. The integration recalculates the durations of each task, keeping the start and finish dates the same, to reconcile with PPM base calendar and resource calendars. This recalculation prepares the project to be rescheduled using the PPM duration-based scheduling algorithm. The project will initially be placed in the “Plan” state. Once the Project Manager has visually compared the converted project to make sure the dates are correct, the project should be moved to the “Active” state.

### **4.4 Augment Microsoft Project with the PPM Dashboard**

Some Project Managers who are accustomed to planning and tracking projects using Microsoft Project will want to continue to do so. This strategy is similar to that of gradually converting from Microsoft

Project to PPM, but in this case we consider those Project Managers who do not wish to eventually make a full conversion. These Project Managers can leverage the PPM Dashboard as a way to publish project information to stakeholders and resources. By synchronizing their Microsoft Project file into PPM, the Project Manager automatically presents project overviews and task assignments to interested parties.

When using the integration in this way, the Project Manager may need to set stakeholders' expectations about project information in the PPM Dashboard. Unlike projects controlled by PPM, the project status information presented in the PPM Dashboard will not always be current. For example, the Project Manager could collect and enter project actuals into Microsoft Project on a weekly basis, and then synchronize the projects. This means that the project information presented in the PPM Dashboard may be up to a week out of date. Project Managers may want to make sure that stakeholders have appropriate expectations to avoid miscommunications.

Using this strategy, Project Managers do not want to allow project resources to enter actuals directly. The Project Managers prefer to collect actuals information from their resources (verbally or by email) and then enter that information into Microsoft Project personally. Likewise, the Project Manager will not want to allow changes to the project planning information in PPM.

To enforce these constraints, the Project Manager selects the "Microsoft Project controls all shared workplan information" synchronization mode when synchronizing the Microsoft Project file into PPM. The previous discussion of resource naming and matching (in the [gradual conversion](#) strategy) also applies to this strategy.

#### **4.5 Augment Microsoft Project by Collecting Simple Actuals with PPM**

A Project Manager may want to use advanced Microsoft Project planning functionality (resource leveling with a shared resource pool, for instance) while providing real time visibility to stakeholders and collecting actuals directly from resources. The "Control is shared" synchronization mode supports this style of integration.

When starting to use the "Control is shared" synchronization mode, a Project Manager should try to "keep it simple" by enabling only a few straightforward actuals fields to be collected through PPM. Resources should be asked to focus on updating the state of their PPM tasks from "Ready" to "In Progress" and then to "Complete" in a timely manner. If early or late starts and finishes are common, the Project Manager may choose to enable these actual fields, to allow resources to directly communicate when work actually occurred. If these are uncommon events, the Project Manager may prefer to track these exceptions personally by changing the start and finish dates in Microsoft Project, avoiding the possibility of resources entering incorrect dates as they learn to use a new way of project tracking.

The [Tracking Project Actuals through the Integration](#) section of this paper discusses in detail why keeping it simple is a good way to start, but we offer a few of highlights here. First, few resources will be accustomed to reporting their progress in a timely fashion. Further, although a Project Manager is used to thinking about tasks in terms of the time or duration worked, percent complete, remaining work, and so forth, most resources will not be as familiar with these concepts as the Project Manager. These metrics have nuances with which the Project Manager is familiar (for instance, is percent complete a duration or effort metric? Does actual duration include non-working days?) The Project Manager will want to be judicious in planning how many of these concepts to introduce, and how quickly.

#### **4.6 Augment Microsoft Project by Collecting Complex Actuals with PPM**

Once the Project Manager has become familiar with how the integration operates in the "Control is shared" synchronization mode, and has educated the project team on how to understand and report task

actuals, the Project Manager may want to collect a richer set of actuals. Many actuals, such as actual work performed, are a key to understanding performance and making progressive improvement.

In addition to the observations in the previous section about how to begin working in the “Control is shared” synchronization mode, the Project Manager will want to review the later sections of this paper on tracking actuals through the integration. A guiding observation to keep in mind is this: through the integration, resources entering actuals into PPM will behave in a very similar fashion to the Project Manager typing the same information directly into the associated field of Microsoft Project.

Microsoft Project offers a wide range of actuals fields, which are tightly interrelated by automatic data integrity rules. Most Project Managers do not take the time to completely learn all of these automatic data integrity rules. Instead, they learn how to track the information that matters to them by making entries into only a few fields. When using the integration to track actuals through PPM, these are probably the fields that the Project Manager will want to enable in the PPM Dashboard.

## 5 Tracking Project Actuals through the Integration

This section discusses detailed strategies and issues involved in collecting task actuals in PPM for projects planned in Microsoft Project. The information in this section is most relevant to projects operating in the “Control is shared” synchronization mode.

### 5.1 Factors in Tracking Actuals

When tracking actuals through the integration of PPM and Microsoft Project, take the following factors into consideration:

- [Progress Reporting](#)
- [Understanding the Metrics](#)
- [Partial Actuals Information](#)
- [Interpreting Actuals Information](#)
- [Recommendation](#)

#### 5.1.1 Progress Reporting

Few resources will initially be accustomed to reporting their progress in a timely fashion. Hopefully resources contact the Project Manager in a timely fashion when work is not proceeding according to plan (late starts, etc.), but they probably have never been directly responsible for updating the project.

#### 5.1.2 Understanding the Metrics

Some of the actual metrics are difficult to understand. Although a Project Manager is used to thinking about tasks in terms of the time or duration worked, percent complete, remaining work, and so forth, most resources will not be as familiar with these concepts as the Project Manager. These metrics have nuances with which the Project Manager is familiar (for instance, is percent complete a duration or effort metric? Does actual duration include non-working days?)

#### 5.1.3 Partial Actuals Information

The Microsoft Project application makes lots of inferences about the meaning of partial actuals information. For instance, entering an actual finish date when the actual start date is blank will automatically fill in the actual duration, based on the assumption that the task started on time. Entering the percent complete will default the actual and remaining durations of the task, based on the assumption that the task will be completed in the planned duration. Few Project Managers are familiar with all of the automatic calculations Microsoft Project is performing, but have become accustomed to Microsoft Project’s “correcting” as they enter actuals.

#### 5.1.4 Interpreting Actuals Information

Microsoft Project can make different and conflicting inferences from different items of actuals information entered. As an example, suppose a resource is assigned a one-day task. Unfortunately, the resource reports that after working for two days, the task is only 75% complete. When the percent complete is entered, Microsoft Project will assume that 6 hours (75% of a day) of actual duration has been spent. But when the two-day actual duration is entered, Microsoft Project will assume that the task is 100% complete, because it has run longer than scheduled. As a Project Manager directly enters this

information into Microsoft Project, he or she will see the mistaken inferences that Microsoft Project has made and will correct them.

### **5.1.5 Recommendation**

These observations add up to a recommendation: try to keep it simple. When deciding which actuals to collect in the PPM Dashboard, the Project Manager should consider whether each actual is an important metric for this project, and whether the resources will be able to assess and report that actual correctly and on time.

## **5.2 Actuals Synchronization Options (from PPM to Microsoft Project)**

Since the correction rules in place in Microsoft Project will prevent PPM to synchronize all actuals fields accurately, Project Managers can select which field(s) PPM will update, and let Microsoft Project adjust the values of the other fields by itself.

### **5.2.1 Percent Complete**

Task percent complete values for tasks in the two applications will be identical. Percent complete values for task groups are rolled up by Microsoft Project, instead of being set directly by the integration. The calculation is similar in the two applications. Therefore, the rolled up values are generally identical. With this option, actual dates (start & finish) are not synchronized, in order to prevent Microsoft Project from aligning the schedule start/finish dates on the actual ones if they are different.

Project Managers should pick this option if they want to track the tasks progress but do not want their work plan in Microsoft Project to be modified to match actual dates.

### **5.2.2 Percent Complete and Actual Dates**

In this mode, in addition to the task “percent complete” value, actual start and finish dates for tasks in the two applications will be identical, except for tasks that are less than 100% complete yet already have an actual finish date. The actual finish date is disregarded in this case.

It is important to note that when an actual date is entered into Microsoft Project, the scheduled date (the Start or Finish field) will immediately take on the same value as the actual date and cannot be changed. If the start date has changed, Microsoft Project will generally respond by changing the finish date also, and cascading that change to all successor tasks.

PPM defaults the actual start date to the current date when the resource moves the task to the “In Progress” state, and the actual finish date to the current date when the resource moves the task into the “Complete” state.

The Project Manager may need to work with the resources that habitually update their tasks late and do not correct the actual dates, to explain the intent of these actual date fields.

Project Managers should pick this option if they want to track the progress of the tasks and also want the actual dates to be reflected in their work plan in Microsoft Project, even when it results in scheduling changes.

### **5.2.3 Actual Efforts**

Synchronizing actual efforts will update the field “Actual work” in Microsoft Project.

Synchronizing an actual effort value, that is larger than scheduled, or a value that is smaller than scheduled on a completed task without an accompanying actual finish date, can cause a cascading schedule adjustment. Depending on the task scheduling settings, Microsoft Project may react to the actual work value by altering resource units or by altering the scheduled finish date. Actual dates are not synchronized in this mode.

Actual effort in PPM is synchronized to Microsoft Project at the task level, not at the resource level. (Microsoft Project allows work to be tracked at more detailed levels, if desired.) Microsoft Project will automatically apportion actual work among the assigned resources, in proportion to the resource assignment units.



## 6 Answers to Frequently Asked Questions

This section of the document answers many of the questions and problems that may occur when integrating PPM with Microsoft Project. You will probably encounter only a few of these questions in any particular implementation. Some questions address cases where the operation of the integration depends on detailed functionality in either of the two applications that users infrequently encounter.

### 6.1 General

General questions, including those that relate to several synchronization modes or business scenarios, are part of this category.

#### 6.1.1 How does PPM generate or modify the MPP files?

PPM uses a third-party library (Aspose Tasks Java) to read and update the MPP files. When the work plan of a project in the “PPM controls all shared workplan information” synchronization mode is downloaded as an MPP file, PPM will not generate the MPP file from scratch; instead, it will open the (empty) MPP file located in `<PPM_HOME>/conf/project_templates/Empty_MPP_Template.mpp`, and will insert all the tasks and resources information in it.

When downloading the MPP file of the work plan of a project in the “Control is Shared” or “Microsoft Project Controls all shared workplan information” synchronization mode, PPM will edit the MPP file stored on the server for that specific project, which is the last successfully synched MPP file uploaded on PPM for this project.

#### 6.1.2 Can we modify the template MPP file?

Yes, you can modify the file located in `<PPM_HOME>/conf/project_templates/Empty_MPP_Template.mpp` – just make sure to back up the file first. This can be useful if you want to download PPM Project work plans as MPP files with some specific text formatting, default visible columns or custom views.

Make sure that the format of the MPP file is at least Microsoft Project 2007. Earlier versions of Microsoft Project MPP format are not supported.

#### 6.1.3 Does the work plan synchronization update PPM or Microsoft Project custom fields?

Both PPM and Microsoft Project have custom field functionality. By default, no custom field will be updated, but you can edit the mapping between custom PPM fields and Microsoft Project fields in the PPM Project Settings page.

#### 6.1.4 Does the interface update PPM or Microsoft Project task notes?

Both PPM and Microsoft Project have task notes functionality, and they can be synchronized. Synchronization of task notes can happen in either direction, but can only happen in one direction at any given time based on the project settings. If the project integration is using “Shared Control mode”, the Project Manager must decide in which direction the notes should be synchronized.

### **6.1.5 Can I change my synchronization mode once I've assigned it to a project?**

While PPM does allow you to change the synchronization mode of a project at any point, it is recommended that this not be done. This ability is provided as an option for one-time correction of the Project mode, and data loss may occur if the synchronization mode is modified. Careful consideration of the synchronization mode that will best suit a project before it is created will ensure the smooth operation of the synchronization functions and prevent possible data loss.

Data loss as a result of changing synchronization mode falls into two categories: active loss and passive loss. Active loss occurs when data that was synchronized in the previous mode is not synchronized in the new mode. The data could be lost or overwritten. Actuals data is most vulnerable to this type of loss. Passive loss occurs when a synchronization does not happen immediately before a synchronization mode change occurs. In this case, data that was entered since the last synchronization may be overwritten or discarded during a synchronization in the new mode.

## **6.2 How is PPM information synchronized into Microsoft Project**

Questions in this category are related to how the information in a PPM project is represented after being synchronized into a Microsoft Project file. The information can be sent out during a synchronization of changes to the PPM project. Most answers in this section apply to the "PPM controls all shared workplan information" synchronization mode.

See [Tracking Project Actuals through the Integration](#) for more information about how actuals are handled in the "Control is shared" synchronization mode.

### **6.2.1 How are external dependencies synchronized?**

PPM supports external tasks dependencies as predecessors or successors. Even if Microsoft Project also does support dependencies on tasks from external projects (other MPP files), these external dependencies will be synchronized to Microsoft Project as task information in a custom Text field, not as "real" Microsoft Project external dependencies.

### **6.2.2 How are PPM scheduling constraints synchronized?**

Both PPM and Microsoft Project represent a scheduling constraint using two kinds of information: constraint types and constraint dates. Some constraint types (for example, "as soon as possible") do not require a constraint date. However, when exporting the work plan of a PPM project in "PPM controls all shared workplan information" synchronization mode to an MPP file, date constraints are not exported as we do create a "do not start earlier than" constraint on each task to ensure that it starts on the same date as in PPM even when the project is scheduled in Microsoft Project.

### **6.2.3 Are all types of PPM references allowed?**

All types of references are allowed in any synchronization mode, however, Microsoft Project does not include the concept of references, so they will not be synchronized to Microsoft Project.

### **6.2.4 How are cancelled or bypassed PPM tasks synchronized?**

Microsoft Project has a simpler task state model than PPM. For instance, in Microsoft Project all unstarted tasks share a common state. Microsoft Project does not clearly distinguish between tasks that are pending predecessors, tasks that are ready, and tasks that are in progress where no percent

complete has yet been reported. This is a consequence of the assumption that task actuals are not entered into Microsoft Project in real time.

Microsoft Project does not have distinct states to recognize tasks that have been cancelled or bypassed either. When a cancelled or bypassed PPM task is synchronized, the keyword 'Cancelled' or "Bypassed" is prefixed to the task name in Microsoft Project to clearly indicate the task state.

Bypassed tasks are synchronized as 100% complete. If any actuals were reported, this information is also synchronized. The bypassed state indicates that some effort may have been spent, but that work was discontinued.

Cancelled tasks are synchronized as 100% complete and with zero duration. Microsoft Project automatically omits these tasks from the Gantt Chart view.

### **6.2.5 How can an unscheduled PPM project be synchronized to Microsoft Project?**

Microsoft Project is usually used in the "automatic" calculation mode. In this mode, when a predecessor or constraint is defined, tasks are immediately shifted to comply with the constraint. PPM instead evaluates scheduling constraints selectively (when the Project Manager chooses to schedule all or part of the project). This means that the Project Manager may choose to leave the project dates out of compliance with a defined scheduling constraint, instead of requiring the Project Manager to adjust the project plan definition to satisfy the tool.

When synchronizing a project in the "PPM controls all shared workplan information" mode, PPM will create a date constraint on every task to ensure that auto-calculation of the project in Microsoft Project when opening the MPP file will not change all dates that were defined in PPM. The drawback of this approach is that any date constraint defined in PPM will not be exported.

Note that the PPM Plugin for Microsoft project does not have this drawback, as it can control Microsoft Project "manual calculation mode" and will switch the calculation mode to "manual" when importing a PPM project into Microsoft Project.

### **6.2.6 Why are the scheduled dates in Microsoft Project sometimes different than in PPM?**

In PPM, a task can have actual start and finish dates that are earlier or later than the planned dates. In Microsoft Project, on the other hand, these actual dates will override the respective scheduled dates. For example, if a task was scheduled to start on May 1<sup>st</sup> but is reported to have actually started on May 2<sup>nd</sup>, Microsoft Project automatically changes the task scheduled start date to May 2<sup>nd</sup>.

When PPM tasks with actual dates are synchronized, Microsoft Project applies these rules to the task data. For this reason the scheduled dates in Microsoft Project may not be identical to the dates in PPM.

Moreover, when PPM task data is synchronized, the highest priority is given to keeping the start date and duration identical. In most cases, the finish date will also be identical. However, Microsoft Project will always recalculate the finish date of each task based on the start date and duration, and the Microsoft Project resource calendars. As a result, there may be some discrepancies.

Usually these discrepancies arise from differences in the resources calendars in the two applications. Note that PPM resource calendars are not synchronized with Microsoft Project resource calendars. For example, the finish date in Microsoft Project would be earlier than that in PPM if some of the intervening days were recognized as non-working time only in PPM.

### **6.2.7 Are PPM resource calendars synchronized?**

Although resource assignments to tasks are synchronized, the calendars of these resources are not synchronized from PPM.

You do *not* need to maintain resource calendars in both applications. Differences in resource calendars can result in discrepant task durations. (See the following question and answer for details.) The start and finish dates, however, will be accurate in the synchronized Microsoft Project file.

### **6.2.8 How are Microsoft Project resource units for task assignments determined during synchronization?**

In PPM, each resource on a task may be assigned different hours of effort for that task. The total effort for the task is the sum of the scheduled effort values for each resource. For example, if Fred is assigned to work 12 hours on a task, and Barbara is assigned to work 8 hours on the same task, then the total task effort would be (12 + 8) 20 hours.

This representation of effort breakdown is slightly different than Microsoft Project's concept of "resource units". Following the same example, if both Fred and Barbara are full-time resources in Microsoft Project, then they might respectively have (12 x 5) 60 and (8 x 5) 40 resource units assigned on the task, if the task's duration is 5 days. But if Barbara is only a half-time resource in Microsoft Project, her resource units on the task would double (to 80), representing the same amount of work, which now takes a larger percentage of her capacity.

When synchronizing a project, the hours of effort for each assigned resource on a PPM task is provided, and Microsoft Project automatically translates the value into the appropriate resource units for the assignment. If the resources involved are not full-time resources in Microsoft Project, then their respective resource units for each task will be proportional to their respective assigned effort values on the corresponding PPM task.

## **6.3 How is Microsoft Project information synchronized into PPM**

Questions in this category are related to how the information in a Microsoft Project file is represented after it is brought into PPM. The information can be brought in either when opening a project during project creation, or during a later synchronization of changes to the Microsoft Project file. Most answers in this section apply to the "Microsoft Project controls all shared workplan information" and "Control is shared" synchronization modes.

### **6.3.1 Are Microsoft Project resource calendars and cost rates synchronized?**

Although resource assignments to tasks are synchronized, the calendars and cost rates of these resources are not synchronized into PPM.

You do not need to maintain resource calendars in both applications. The task durations resulting from the Microsoft Project resource calendars are maintained. These task durations are only recalculated to match the PPM resource calendars when placing a project in the "PPM controls all shared workplan information" synchronization mode.

### **6.3.2 Are Microsoft Project resource units synchronized?**

When synchronizing a project, Microsoft Project automatically translates the resource units for each task assignment into real hours of effort. These effort values are then specified directly on task assignments in PPM. (See section [6.2.8](#) for an examination of the difference between Microsoft Project's resource units and PPM's hours of effort.)

### **6.3.3 Are Microsoft Project baseline dates synchronized?**

Baseline information is not synchronized by the integration to PPM work plan baseline, however, you can save each of the Microsoft Project Baseline fields (start, end, duration, work) in a PPM task user data field.

The project baseline can be captured and maintained in either product, as the project manager prefers.

### **6.3.4 How are Microsoft Project predecessor relationships synchronized?**

The most commonly used type of predecessor is a finish-to-start predecessor. This type of predecessor means that the preceding task must be finished before the successor task should start. Many Microsoft Project users never use any other type of predecessor. Predecessors of this type are synchronized into PPM.

Microsoft Project supports other types of predecessors that are infrequently used: start-finish, finish-finish, and start-start. These types of predecessors are supported by PPM, and will be synchronized. External dependencies defined in Microsoft Project will not be synchronized to PPM. We expect Project Managers to create external dependencies in PPM only, as PPM is acting as a project repository and all the projects and tasks are available there. It is possible to define external dependencies in PPM in all integration modes with Microsoft Project, even when “Microsoft Project controls all shared work plan information”.

### **6.3.5 How are Microsoft Project scheduling constraints synchronized?**

Both PPM and Microsoft Project represent a scheduling constraint using two kinds of information: constraint types and constraint dates. Some constraint types (for example “as soon as possible”) do not require a constraint date. Both the constraint types and dates are synchronized into PPM.

Microsoft Project supports some scheduling constraints that are infrequently used: “as late as possible”, “must finish on”, and “finish no earlier than”. These scheduling constraints are a way to plan a project backward from an end date.

### **6.3.6 How are split tasks synchronized?**

Microsoft Project can schedule work on a task to start and stop several times. This is referred to as a split task. Task splits are usually automatically (and sometimes accidentally) created by the Microsoft Project resource leveling feature with settings that instruct Microsoft Project to split task work, instead of adjusting units.

PPM tracks a task with a single start and finish date. When a split task is synchronized, the start date will be the start date of the earliest split, and the finish date will be the finish date of the latest split. If the project is in either the “Microsoft Project controls all shared workplan information” or “Control is shared” synchronization mode, the synchronized duration will be identical to the Microsoft Project duration. In the “PPM controls all shared workplan information” synchronization mode, the duration will be recalculated to span from the earlier split start to the latest split finish date. In either case, the task split information in Microsoft Project will not be altered by the integration.

### **6.3.7 How does the integration work with Microsoft Project resource leveling?**

Microsoft Project offers an automatic resource-leveling feature, which attempts to automatically resolve resource over-allocations. Resource leveling calculates a “leveling delay” for each task and adjusts the schedule dates accordingly.

A project can be scheduled in Microsoft Project using resource leveling and then synchronized with PPM. Only the leveled start and finish dates are synchronized into PPM. Although the “leveling delay” is not imported, PPM will faithfully maintain the resulting schedule dates. Rescheduling the project in PPM could change these dates.

### **6.3.8 How are lag or lead offsets on Microsoft Project predecessor relationships synchronized?**

When a Microsoft Project predecessor relationship is defined to have a lag or lead (a positive or negative offset to the normal predecessor relationship), Microsoft Project will adjust the start and finish dates of the successor task accordingly. The lag and lead offsets are supported by PPM, and are synchronized.

### **6.3.9 Are Microsoft Project work contours or delayed assignments synchronized?**

Microsoft Project allows task assignments to be further specified with a work contour or with “delayed start to work”. Contoured or delayed assignments are synchronized into PPM as simple assignments.

As an alternative, a Project Manager can create similar project plans by dividing the task into several sub-tasks that have distinct non-contoured assignments. This approach is often preferable since it gives clearer visibility from project views and is easier to explain to resources.

### **6.3.10 Will the synchronization affect my macros and VB scripts?**

Macros, VB scripts, or other extensions should not be affected by the integration.

### **6.3.11 What happens when a user deletes a task in Microsoft Project which has actuals in PPM?**

In PPM you cannot delete a task which has actuals, but in Microsoft Project you can. You will get a warning message in Microsoft Project, but Microsoft Project will still allow you to delete the task. If this happens, you will get a synchronization error that a dependent task has been deleted. You will then be prompted to download the last MPP file that was successfully synchronized to PPM, and you will have to manually reconcile your MPP file to add back the task with actuals that was deleted before you will be able to successfully synchronize.

## **6.4 Troubleshooting**

Because PPM and Microsoft Project make conflicting assumptions about how to interpret data, integrating the two applications can result in the same data being presented differently from one application to the other.

This section addresses some of these points in the integration. It also describes how to troubleshoot any synchronization problems, should that be necessary.

### **6.4.1 How will synchronizing a Microsoft Project file change the project?**

Synchronizing a project file into PPM will not make any change to the Microsoft Project file. However, when downloading the MPP file from PPM while in the “Control is shared” mode or “Microsoft Project control all shared workplan information” mode, the following changes can be made to the file by PPM before it’s downloaded:

- External predecessors or external successors will be inserted if they are mapped to some Microsoft Project custom text fields.
- If the PPM project is a hybrid project with linked tasks, the linked tasks information will be updated with the latest information from PPM. If the linked task name hasn’t been modified yet, a “[linked]” prefix is added to the task to inform the project manager that this task is linked in PPM and should not be deleted or modified in Microsoft Project (except for the task name).
- If the project is in the “Control is shared” mode, task actuals will be inserted according to the project settings (See [Tracking Project Actuals through the Integration](#) for more information).

### **6.4.2 How does cutting and pasting affect the synchronization process?**

In Microsoft Project, if you cut and paste a task, you have effectively deleted it and created a new task with the same attributes. This is important, because the new task is not considered, for purposes of synchronization, to be the same task – the synchronization can’t figure that out. If, instead, you select the task and then drag it to the desired position, it is still the same task.

If you’re in doubt about the effects of edits in Microsoft Project (like creating a new task and moving the existing task), you can show a column called “Unique ID”. As long as the Unique ID value doesn’t change, your edits will not affect the synchronization.

### **6.4.3 How is an unsatisfied finish-to-finish request predecessor synchronized?**

When a PPM task is a finish-to-finish predecessor of an open Demand Management Request, the task can be 100% complete but not fully finished. Tasks that are successors of this task will stay in a ‘Pending Request’ state until the Request is completed.

When synchronizing tasks in this condition, the integration will report the task percent complete as 100%.

### **6.4.4 How are Blocking and finish-to-finish request predecessors handled during synchronization?**

When a task has either a Blocking or a finish-to-finish request predecessor that is incomplete, some types of task updates are not blocked. For instance, a task that is pending a request cannot be marked as complete. PPM enforces these constraints automatically.

Unfortunately, Microsoft Project does not have the capability of adding dependencies on requests. The predecessors on requests in PPM are synchronized, but they are ignored by Microsoft Project.

#### **6.4.5 Why isn't Microsoft Project calculating roll-up values?**

Microsoft Project allows you to choose between “automatic” and “manual” scheduling modes. Since “automatic” is the default, many users never discover that there is another choice. When Microsoft Project is in the “manual” scheduling mode, you must press the **F9** key to recalculate task grouping roll-up values. Instructing Microsoft Project to schedule a project synchronized in this mode can make many changes to project dates.

#### **6.4.6 Why does synchronizing actuals change the scheduled dates in Microsoft Project?**

Microsoft Project may reschedule the project after downloading the MPP file with updated actual dates from PPM. The following notes summarize the interaction. See [Tracking Project Actuals through the Integration](#) for more information.

When you synchronize projects in the “Control is shared” synchronization mode, information is transferred in both directions. Upon MPP file download, the PPM actuals are applied to Microsoft Project. Upon MPP file upload, the Microsoft Project schedule dates are applied to PPM.

When a task is updated with actuals, Microsoft Project checks whether the scheduled dates and durations are consistent with the actuals. If Microsoft Project finds any discrepancies, it automatically reschedules the task to correct the problem and align scheduled dates with actual dates. You will observe the same behavior if you enter the actuals manually.

When the synchronization applies PPM actuals to the tasks in Microsoft Project, it is likely that Microsoft Project will implicitly adjust some of the schedule dates. There is no way to turn off that feature of Microsoft Project. If this is a concern, you may always decide not to synchronize actual dates in the PPM Project settings.

#### **6.4.7 How can I synchronize a Microsoft project in a SQL Server database?**

In order to synchronize a project with PPM, the project needs to be in a file format (preferably the binary MPP file format.) To synchronize with a project stored in an ODBC source like a SQL Server database, you should first open a project from the remote source and use the Microsoft Project "Save As ..." feature to save the project to your local computer. After you have synchronized the MPP file with PPM, you can save the local file back to the ODBC source if you wish.

#### **6.4.8 Why are the actual durations of some task groups not synchronized into PPM?**

PPM and Microsoft Project do not have the same functionality for the actual durations of task groups or summary tasks that are still in progress. Microsoft Project presents the actual duration to date as a tentative figure. PPM waits until the entire summary task is complete to present a rolled-up total. When the task grouping is complete, PPM will display the same actual duration value.

The explanation above applies to the “Microsoft Project controls all shared workplan information” and “Control is shared” synchronization modes. In the “PPM controls all shared workplan information” synchronization mode, there is a simpler explanation. When a project is initially opened in this mode, it is placed in the “Plan” state. Roll-up values, like exceptions and other indicators, are calculated when the PPM project is changed to the “Active” state and saved.



#### **6.4.9 Why is the Microsoft Project start date of a task group sometimes later than some tasks?**

When using the “PPM controls all shared workplan information” synchronization mode, the start date of a task group may not be the earliest start date of all tasks within that group. This is a side effect that can appear if Microsoft Project is in the “manual” calculation mode, which stops Microsoft Project from recalculating the PPM schedule dates automatically. In the “manual” calculation mode, Microsoft Project does not automatically roll up dates to task groups. When the PPM scheduled start date for the summary task is later than the actual start dates of some tasks (because a task was started early, for instance), Microsoft Project will correct the scheduled start dates of the tasks but not of the task group.

#### **6.4.10 Why does synchronizing an estimated finish date from PPM create a constraint?**

Unlike most PPM actuals, there is no corresponding Microsoft Project field for the estimated finish date. The closest match available is the scheduled finish date, since in Microsoft Project the start and finish dates are automatically updated to reflect actual dates and estimates as these become available.

When a specific value is entered as the finish date in Microsoft Project, the application assumes that the task should also be constrained to finish exactly on that date. When the integration updates the finish date of a Microsoft Project task to match a Project Management estimated finish date, Microsoft Project implicitly creates a finish-no-earlier-than constraint with this same date.

In the “Microsoft Project controls all shared workplan information” and “Control is shared” synchronization modes, Microsoft Project will be the authority for scheduling information. In these modes, the estimated finish date in PPM will always be overwritten by Microsoft Project’s finish date.

#### **6.4.11 Can I automatically create PPM user accounts for unmatched resources?**

The integration does not currently have this capability. The Project Manager should save or print out the list of unmatched resources generated by the integration, and work with the PPM Administrator to create these user accounts.

#### **6.4.12 How is task duration recalculated when a Microsoft Project plan is synchronized?**

The duration displayed in a synchronized PPM project depends on the synchronization mode chosen.

In the two synchronization modes where Microsoft Project controls the schedule (“Microsoft Project controls all shared workplan information” and “Control is shared”), the task duration shown in PPM is identical to the duration in Microsoft Project. Any calendar information from PPM is ignored to compute the task duration.

In the “PPM controls all shared workplan information” mode, the interface needs to recalculate the durations during synchronization to reconcile the dates to the PPM resource calendars. This prepares the project to be scheduled using the PPM duration-based scheduling algorithm.

You will see two types of changes to the durations. First, if the non-working days indicated in the Microsoft Project calendars and PPM calendars are different, the duration can change either up or down. The start and finish dates will not change.

The second type of change appears if you configured PPM to have a non-8-hour/day schedule, say, a 10 hour/day work schedule. Since most Microsoft Project plans are built using an 8 hour/day work schedule, this means that in general PPM will consider a task with one day's duration to have ended two hours before the end of the work day. (Although the Microsoft Project interface does not display the start and finish times, this information is tracked in order to allow tasks with durations of less than one whole day.) The effect of this difference is that tasks that in Microsoft Project have a duration of an even number of days will be shown in PPM as having a duration of a multiple of .2 day shorter.

When you later reschedule the project in PPM, this difference can have an impact. The PPM scheduling algorithm will attempt to compact your plan to use up all available time, including these apparently unused 2 hours at the end of tasks. To prevent this, the Project Manager will want to make the durations have whole numbers only, for the portions on the project plan that will be rescheduled using PPM.

#### **6.4.13 Why aren't my dependencies between projects preserved when synchronizing with Microsoft Project?**

By default, PPM will preserve external dependencies when the work plan is synchronized from Microsoft Project. However, it's possible to wipe out all external dependencies upon synchronization by unselecting the option "*Preserve existing external predecessors in this project when the work plan is synchronized from Microsoft Project*" in the PPM Project settings. If your external dependencies disappear upon synchronization, verify if this option hasn't been unchecked.

#### **6.4.14 Why aren't my Major Milestones showing up in Microsoft Project after synchronization?**

PPM will synchronize all milestones with Microsoft Project, however, Microsoft Project does not have the concept of "Major Milestones". In the case where a Major Milestone has been defined in PPM, it will be synchronized with Microsoft Project as a standard milestone.