Infor LN Project External Scheduling Interface User Guide

Important Notices

Trademark Acknowledgements

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About this document

This guide provides information about the process to set up and use the External Scheduling Interface for projects.

Objectives

The objective of this book is to describe the purpose of the external scheduling package, the related benefits, and the processes to create and maintain links between project activities and external scheduling packages.

Intended Audience

This book is intended for users who utilize the external scheduling packages. The information benefits both end users and users on administrator level.

Assumed Knowledge

Knowledge of the processes involved in creating links between project activities and external scheduling packages, and general knowledge of the Infor LN functionality helps a user better understand this guide. In addition, Project training courses are also available.

Document summary

The first chapter describes the purpose and the general features of an external scheduling package.

The following chapters deal with the setup and the process to create and maintain links between project activities and external scheduling packages.

How to read this document

This document is assembled from online Help topics. Therefore, references to other sections in the manual are presented as displayed in this example:

Refer to the Table of Contents to locate the referred section.

Underlined terms indicate a link to a glossary definition. If you view this document online and you click an underlined text, the respective glossary definition is displayed. Non-underlined references do not represent a link to glossary definitions or other elements.

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Chapter 1
Introduction

1

This section provides an overview of the External Scheduling Interface.

To use an external scheduling package

Infor LN Project allows to use external scheduling packages (for example, Microsoft Project) to determine the scheduling information of the activity structure. The main function of an external scheduling package (ESP) is to determine the scheduling information for both activities and budget lines. You can use this scheduling information for an activity budget and a time-phased budget. To enable this functionality, an ESP must share information with the Requirements Planning in LN. This document describes the:

- Advantages of the interface.
- Set up the application using the parameters.
- Cost object settings.
- Use the interface session for the actual ‘export to’ and ‘import from’ process of an external scheduling package.

The primary advantage of using the Microsoft Project XML format to exchange data with an external scheduling package is that multiple packages are compatible with this XML format. For example, Microsoft Project, however other products can also be considered.

The advantages:

- No additional software is required. The available XML file can be used in the format defined by Microsoft.
- Technology is simple and can be easily extended. Also, there are no dependencies on an operating system or on any additional software that is installed.
- Integration functionality can be used to connect to other packages that use the XML format that is utilized by Microsoft. This enables the use of a scheduling package that is already available with the customer or that is specified by the client of an LN customer.
- Customers can use a package that is suitable for their requirements and in accordance with the cost-of-ownership that is accepted by the customer.

These actions are required to enable an ESP to determine the scheduling information for an activity structure:

1. Create the activity structure.
2. Optionally, resource requirements can be specified using the activity budget.
3. Export data to the ESP.
4. Optionally, assign the resources in the ESP.
5. View the planning results.
6. Export the information to an XML and import the data in LN
7. Setting up a project (activities, budget lines) can be done either in LN and export the result to the ESP or by setting up a project, activities in the ESP with the conditions that at least one export has to be performed to export the LN resources (Cost objects) prior to create resource (budget) lines in the ESP.

Planning can be done in the external scheduling package and the project can be started, executed, tracked and closed in LN. The progress can be monitored using the external scheduling package:

Create the activity structure: Use the Requirements Planning to create a hierarchical activity structure. The building blocks of this structure are activities that you can define as WBS elements (the highest in the hierarchy). The hierarchical levels in the structure are:

- work breakdown structure element
- control account
- planning package
- work package

If the **All Activity Types** check box in the Project Parameters (tppdm0100s000) session is selected, you can use these different types of activities. If the check box is cleared, only the activity type **Work Package** is applicable.

Create an XML file based on the information in LN. Apart from the activity structure and milestones data, the XML can also include the employees, trade groups, cost objects, budget, and calendar data.

Import data to the ESP: You can now import the activity structure, employee data, trade groups, the calendar, cost objects, existing budget lines, and milestones in the ESP.

Note

The import is initiated from the ESP and does not require any interactive access with LN. The start date, finish date, or both are pre-loaded in the external scheduling package when the structure is transferred. The addition of scheduled dates from the application is only performed the first time the data is transferred. If dates are not specified, the duration can be derived from the existing information on the activities.

In the ESP, each Project activity is converted to a XML file. You can use this code file to create activities in the ESP. Both, the resource assignments and the scheduled dates of sub-activities are included in the activities, and the date related information can be used in the Project.

Assign the resources in ESP: You can build the schedule for each activity, and assign the resources to activities. To assign resources, activities must be linked to a standard cost object or a project-specific cost object as defined in Project Definition.

View the activity budget: At this stage of the process, the activity structure contains budgeting and scheduling information. You can transfer this data back to Project. The application converts the ESP resource-assignments to project budget lines, and the resources are mapped to the project cost objects, employees, and trade groups.

Chapter 2
Parameters setup

2

Defining the External Scheduling Interface

To set up the External Scheduling functionality, you must define the required parameters using the Project Planning Parameters (tppss0100s000) session.

To define the parameters

In the Project Planning Parameters (tppss0100s000) session, on the **External Scheduling Interface** tab, you can specify the default settings for the external scheduling package:

Step 1:

Select the **Integration External Scheduling Package** check box to specify if the scheduling package integration is implemented. In the group box, specify this information:

1. **Currency**: Specify the currency in which the planner of the External Scheduling Package (ESP) can view the resource cost rates and the activity or budget line costs.
   Note:
   - The LN application supports multiple currency systems. Usually an ESP supports only one currency.
   - The XML for the ESP requires an ISO currency code. You can configure the ISO Currency Code using the Currencies (tcmcs0102m000) session.
   - Costs that are displayed in the scheduling packages, only indicate that these costs are converted based on the Currency Rates when the XML file is exported to the ESP. The Costing functionality in most scheduling packages is limited. Therefore, the costs are maintained by the LN application and are not considered when imported.
2. **Time Unit for Hours**: Specify the quantity or number of resources assigned (cost objects such as equipment, labor, or subcontracting), expressed in units of time. These cost objects must be converted to a time unit of the ESP (resource time and amount of work). The **Time Unit for Hours** is the reference to the ESP Time Unit. **Note**: Use the Conversion Factors (tcibd0103m000) session to convert the time unit of the resource to the Time Unit for Hours. External Scheduling Packages often use hours or seconds (Hours * 60 minutes * 60 seconds) as the Time Unit.

3. **Date Type for Scheduling in ESP**: Select the data type that must be used to schedule activities in the application. The available options are **Early Dates** or **Scheduled Dates**.
4. **Export Actual Spent Hours**: The actual spent hours are calculated based on the hours of the cost objects such as labor, equipment, and subcontracting. LN exports the data for actual hours spent to the external scheduling package. If this check box is cleared, the progress information is not displayed and the hours related data is not exported.
5. You can use **Export Actual Spent Hours** check box to include the actual hours spent during the export of data from Infor LN to display the progress in the ESP. This functionality is applicable for all hours related to Budget Lines and Cost History for these Budget Types/ Cost Objects:
   - Labor
   - Equipment
   - Subcontracting (subcontracting such as subcontracting of items based on pieces is not included)
6. **Repository Location**: Specify the location where the project XML files must be copied. This file is required as the ESP can include additional planning related internal administration requirements for the project than can be configured in the application. Therefore, this copy is the reference file for all the synchronization processes. **Note**: The Repository Location is not mandatory, if not specified LN determines a default location on the server.

Step 2:

In the **Transfer Resource** group box, select the type of resource data that must be transferred to the ESP. **Note**: Budget Line resources can be of the cost type **Material**, **Labor** (**Employees**, **Trade Group**, and **Labor Cost Object**), **Equipment**, **Subcontracting**, and **Sundry Cost**. For Labor, you can select **Employees**, **Trade Group**, or both. Alternatively, you can use the **Labor Cost Object** for the task.

Step 3:

In the **Transfer Assignment** group box, based on the cost type, you can configure the level of the assignment that can be defined as the default value for the External Scheduling Interface (tppss2231m000) session. In the application, the resources are linked to Budget Lines, and the Budget Lines are linked to Activities. In the ESP, Budget Lines and Activities can be considered as tasks; or only the Activities are considered as tasks and the resources are directly linked to the Activities.

Step 4:

Select the **Export OBS** check box to export the organization breakdown structure data of the project to the ESP. If this option is used, you must select the Outline code to be included as part of the export to the XML file.

Step 5:

In the **Activity** group box, specify the activity related data based on which the task name of the ESP and the custom fields are defined:

1. Select the Custom fields to be used. The Microsoft Project XML file allows for customs fields, which can be used to transfer additional data. For example, if the value in the field Activity Code is 2, the Activity Code, Budget Line Object Code or both must be specified in the ESP custom Text 2 field. **Note**: This flexibility to select a custom field is required, as a specific custom field can already be in use by customer.
2. Save the parameters.
3. In the Calendar Parameters (tcccp0100m000) session, specify the **Default Availability Type for ESP** that is used in combination with the configured calendar codes.
4. In the Calendars for External Packages (tcccp0181m000) session, specify the required information to ensure that the central calendars are available to the ESPs for planning.

Note: For resources, the **Used in Schedule** option must be selected, in the related sessions, to ensure that these resources can also be used in the ESP.

Step 6:

In the Calendar Parameters (tcccp0100m000) session, specify the **Default Availability Type for ESP** that is used in combination with the configured calendar codes. In the Calendars for External Packages (tcccp0181m000) session, specify the required information to ensure that the central calendars are available to the ESP for planning.

Chapter 3
External Scheduling Interface

3

Using the External Scheduling Interface

You can use the External Scheduling Interface (tppss2231m000) session to export a project to the external scheduling package (ESP). A XML file is used to export the data. **Note** You can also import a project to the LN application, using a XML file, after you optimize the planning process in the respective scheduling package.

You can also use this session to:

- Import or export multiple projects from or to an external scheduling package.
- Only export the calendars defined in these sessions:
  - Calendars for External Packages (tcccp0181m000)
  - Employees (tccom0501m000)
  - Trade Groups (tppdm0530m000)
  - Equipment (tppdm0112s000)

The options available in the session are:

- *Export (p. 15)*
- *Activities and Budget Lines (Tasks) (p. 16)*
- *Project Cost Objects and Standard Costs Objects (Resources) (p. 16)*
- *Assignments (Budget Lines) (p. 17)*

Export

You can use this option to transfer the general project information to the ESP.

Export the general project information data

This project information is exported to the XML or used in the process to create the XML file:

- **Start Date** and **Finish Date** of the project
- **Description**
- **Calendar** and **Availability Type**
- **Currency** for the External Scheduling Package

- Time zone of the Company

Important!

The ESP requires a project Start and Finish date and the **Duration** (calculation based on the start and finish date including a **Calendar** and **Availability Type** combination). However, in Infor LN these fields are not mandatory. In this scenario, the session is used to determine the default date. It is recommended that you include this data in the application to reduce the amount of work required to rearrange tasks in the ESP.

The Activities and Budget Lines (Tasks), Standard Costs Objects, project related Cost Objects (Resources), and Calendars data can also be exported to the ESP.

Activities and Budget Lines (Tasks)

You can use this option to export the activities and budget lines data to the ESP.

Export activities and budget lines (Tasks) data

This data is exported to the ESP from the Activities (tppss2100m000) session:

- Identification information such as **Activity**, **Budget Status** and the related activity lines.
- Scheduling information such as **Scheduled Start Date** and **Scheduled Finish Date**, **Calendar**, **Duration** (calculated), work, and the **Milestone**. The relations as defined in the Activity Relationships (tppss2510m000) session are also transferred. **Note**: Check the appendix for the exact mapping of the LN information to the XML file.
- Progress information such as **Actual Start Date**, **Actual Finish Date**, and the **Schedule Percentage Complete**.
- Costing information such as **Quantity**, cost , and amount.

If a task calendar does not exist or is not configured correctly, the project calendar data is used to calculate the scheduling information. However, the application displays a warning.

By default, all budget lines are exported to the ESP, but it is possible to configure project specific restrictions using the **Transfer Assignment** option in the session. The values are defaulted from the Project Planning Parameters (tppss0100s000) session. If the resources of a specific cost type are not exported, the corresponding budget lines cannot be included. For example, if Equipment is not included as a resource type, the corresponding budget lines for equipment also cannot be selected for export. It is recommended that you only export cost types and cost objects for which a value is specified in the scheduling package and that are required for planning.

See To use a plan.

Project Cost Objects and Standard Costs Objects (Resources)

You can use this option to export the project cost objects and standard costs objects (Resources) to the ESP.

Export project cost objects and standard costs objects (Resources) data

Cost objects are included in the export only if the cost type is selected and if the **Used in Schedule** option is selected in the respective cost object sessions. Using these options, it is possible to prevent that cost objects that are not required are included in the XML to ensure that the files are manageable.

This data is exported to the ESP:

- Identification information specified in the **Transfer Resource** group box such as the resource type and cost object.
- Scheduling information such as the **Calendar**.
- Costing information such as the sales price and cost rate.
- Additional information such as employee information, user account, and email address from the Employees (tccom0501m000) session.

Restrictions for the export of Cost Objects and other resources:

Cost Object/Resource	Restriction in Cost Object	Restriction Session option “Transfer Resources”
Employees	Used in Schedule = Yes	Employees = Yes
Trade Group	Not Applicable	Trade Group = Yes
Standard Labor	Used in Schedule = Yes	Labor Cost Object = Yes
Project Labor	Related to selected project	Labor Cost Object = Yes
Standard Equipment	Used in Schedule = Yes	Equipment = Yes
Project Equipment	Related to selected project	Equipment = Yes
Standard Subcontracting	Used in Schedule = Yes	Subcontracting = Yes
Project Subcontracting	Related to selected project	Subcontracting = Yes
Standard Sundry Costs	Used in Schedule = Yes	Sundry Costs = Yes
Project Sundry Costs	Related to selected project	Sundry Costs = Yes

Assignments (Budget Lines)

You can use this option to export the assignments data to the ESP.

Assignments (Budget Lines)

Activity budget lines are used to define the demand for resources that are required to accomplish a task. This demand can be expressed in units such as pieces (material, subcontracting, or sundry), or in a time unit such as hours (equipment, labor, and subcontracting).

Example

For a labor line with cost objects, **Labor**, **Employees** = ARNOPNT, and **Trade Group** = AP.

The sequence in which the cost object is evaluated and transferred is Labor, Employee, and Trade Group. You can use the options in the **Transfer Resource** group box to determine, if a cost object level must be skipped.

Note:

- The **Labor Cost Object** check box must be selected to specify the cost object **Labor**.
- If the **Transfer Resource** data is cost object, **Labor** and resource is located and assigned to the same. However, if the **Employees** and **Trade Group** check box is selected, but the employee is not linked to the Activity Budget Labor Line, a resource is not assigned to the budget line in the ESP. An error message is also displayed during the export.
- The **Employees** and **Trade Group** check boxes are optional.

Conclusion:

Cost object of the type, **Labor** must be linked to an assignment. For a cost object of the type, Employees and Trade Group, the **Employees** and **Trade Group** check boxes are not selected, the resource cannot be located in the Activity Budget Labor Line. Additionally, it is possible that the session detects an empty Trade Group or Employee field, and an error message is generated.

Chapter 4
Importing data

4

Importing data from the external scheduling package

You can use the External Scheduling Interface (tppss2231m000) session to import data from the external scheduling package:

- Scheduling information such as the planned start and finish date (calculated by the ESP) and the related tasks.
- Progress information such as actual start and finish date, and the percentage completed.
- Constraints on activities for which Must Start On or Start No Later Than values are specified.
- Quantity (costing data). Costs must be recalculated in LN after the data is imported.

Example

In the External Scheduling Interface (tppss2231m000) session:

1. Select the **Import** option.
2. Select the **Project**, for example, PVD000004.
3. Specify the **Connection Node**, if applicable.
4. In the **XML file** field, specify the filename.
5. Click **Process**. **Note**: The progress of the import is displayed. The application also displays a message, if the import is successful. However, to generate this message you must select the **Show Warnings** check box.

It is recommended that you review the message, as the reasons for the errors that occurred during set up of the application are displayed.

Create a project in LN

You can also create a new project in LN based on an XML import. However, some conditions are applicable:

- Relevant company parameters, default values, or both must be specified.

- The User profile is used to establish the Project Series and Project Procedure.
- The Project Management Office is used as the default value for the Enterprise Unit.
- The Title in the XML is used as the project description.
- The Project origin is set to Inserted by External Package.
- Task information is used as the activity code. However, this can result in naming issues which you must manually resolve.

Restrictions:

- Actual data such as progress must not be specified in the XML file. This is because if the status of the project created in LN is Free, the progress of the same cannot already be specified.
- You cannot import an XML file that is created based on the export of data from LN to XML for another project.

Chapter 5
Exporting data

5

Exporting data to the external scheduling package

You can use the application to export this data to the external scheduling package:

- General project information
- Trade Groups, Employees, Standard Costs Objects and the project related Project Cost Objects (also referred to as Resources)
- Activities and Budget Lines (also referred to as Tasks)
- Calendars

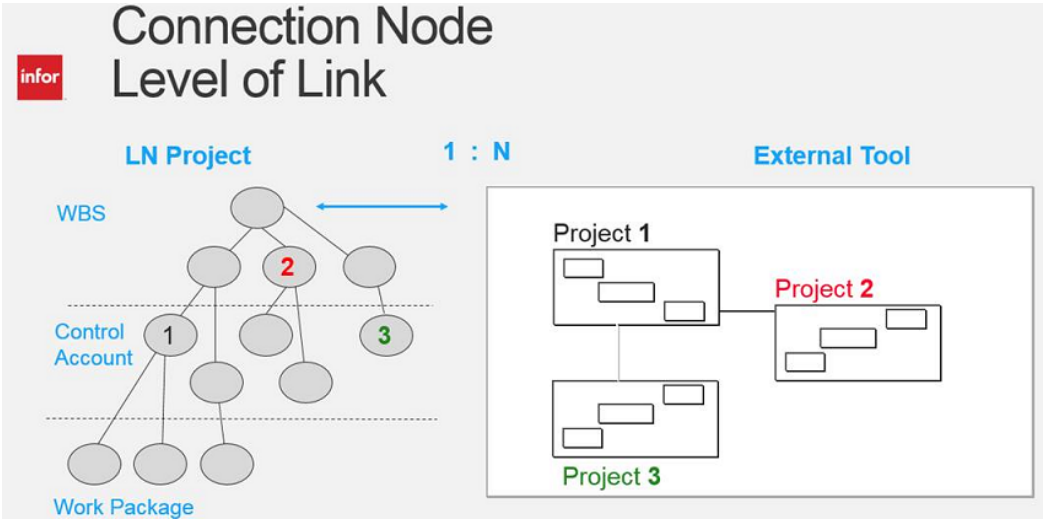
Example

In the External Scheduling Interface (tppss2231m000) session:

1. Select the **Export** option.
2. Select the **Project**, for example, PVD000004.
3. Specify the **Connection Node**, if applicable.
4. In the **XML path** field, specify the file path.
5. In the **XML file**, specify the filename.
6. Click **Process**. **Note**: The progress of the export is displayed. The application also displays a message, if the import is successful. However, to generate this message you must select the **Show Warnings** check box.

It is recommended that you review the information, as the details of the errors in the data setup of the application are displayed.

Note: If required, more than one external project can be linked to a LN project using the Connection Node. This enables the handling of different parts of a project by different organizational elements or planners. When you link an external project to a specific activity in the activity structure or the connection node, consequently, the external project is also connected to a LN project. For example, the construction and commissioning activities to one external project and engineering activities to another external project. It is also possible to use a different external tool or part of the planning can be handled in LN.


Connection Node
Level of Link
LN Project
1 : N
External Tool
WBS
2
Control
Account
1
3
Work Package
Project 1
Project 2
Project 3

Chapter 6
Calendars

6

Defining Calendars

You can create calendars using the application. When you create a calendar, a **Calendar Code** and the **Availability Type** must be defined in the Calendars for External Packages (tcccp0181m000) session.

You can also export your calendars using these sessions:

- Calendars for External Packages (tcccp0181m000)
- External Scheduling Interface (tppss2231m000) based on calendars specified for these cost objects:
  - **Employees**
  - **Trade Group**
  - **Equipment**

You must also specify the process to define the content for a calendar using these two options:

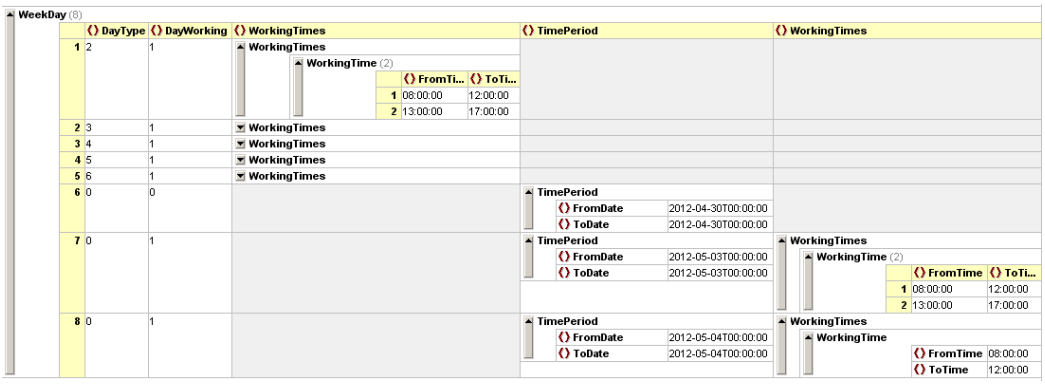
Defining a Standard Calendar

You must define the Availability Types for the work hours and non-work hours for each day in the Calendar Availability Types (tcccp0150m000) session. For example, availability type NOR: Saturday and Sunday are non-working days (Standard Calendar not defined); Monday to Friday are working days from 8:00 to 17:00 hours with a one-hour break.

To create a standard calendar:

1. In Common, specify the calendar period.
2. Specify a value for the Day field and assign an Availability Type to generate a complete calendar for the year.
3. Specify the model deviations based on the **Derived From** field in the Calendar Working Hours (tcccp0120m000) session, if applicable.

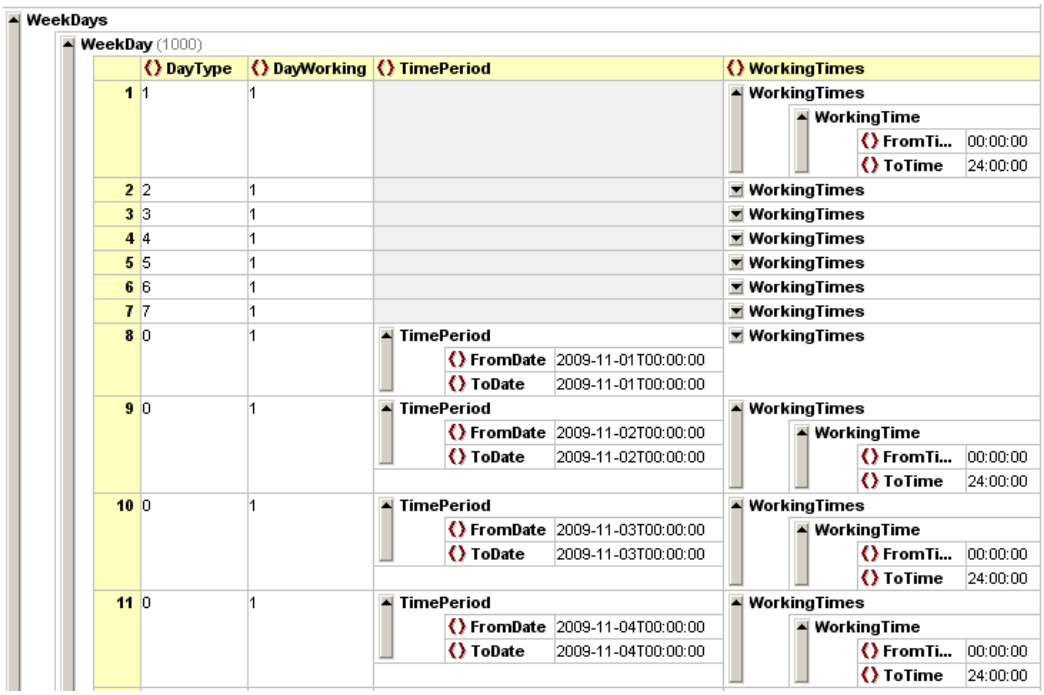
A compact XML based calendar definition is created:



Defining a Non-standard Calendar

A non-standard calendar must be created manually using the Calendar Working Hours (tcccp0120m000) session. Therefore, the range for each day and the range of hours must be defined separately.

As each day is defined, a 1000-day definition is created:



The export of calendars as part of the interface is optional, if LN calendars are not relevant or the export is for testing purposes only.

The advantage of excluding calendars is that an XML file is smaller and any issues in the calendar setup in LN can be avoided. If during the next export, the calendar information is considered relevant, the Regenerate option must be used to export the data.

Chapter 7
Attributes

7

Extended Attributes overview

Extended attributes can be specified in an XML, which can be used to transfer additional information from and to the external scheduling package. For example, the OBS element to an Outline code. In a XML file for Tasks and Resources, Extended Attributes are also defined with the primary key of the ERP Enterprise related tables.

Note

Attributes are mandatory and must not be modified manually in the External Scheduling Package. Modifying these attributes can lead to issues in the system.

The extended attributes for the Task or Resource are defined so that you can view both the code and description of the Activity or Budget Line. For example, ERP Enterprise Task and ERP Enterprise Task Description.

Types of Extended Attributes:

Category	Extended Attribute Name	Example
Task	Task ERP Enterprise, Task Extended Attribute, Primary Key	PVD000004/001/REFUR/6/1 (project/plan/activity/budget type/budget line)
Task	ERP Enterprise Task	REFUR (Activity code or Budget Line Object Code)
Task	ERP Enterprise Task Description	Refurbish Bike (Activity code or Budget Line Object Description)
Resource	ERP Enterprise Resource Extended Attribute Primary Key	PVD000004/001/35/2/ PVD000004/ARNOCRANE

	(project/plan/resource type/project resource indicator yes-no /object)

Chapter 8
External scheduling options

8

Import and Export specific options

These are the fields and options that can be used in the External Scheduling Interface (tppss2231m000) session, during the import or export of data:

- **Regenerate XML file**
  Use this option to generate data again, during the export process. When you export a XML file for the first time, the XML file is created based on the project data in LN. When you import the XML file from an ESP, additional ESP information is stored on the serve which also includes information that is not used in LN. In further export and import processes updates are made to the existing XML information. There can be a number of reasons to use the regenerate flag:
  - In case of import errors, however, the user may decide to continue with the data that is available in LN and which is validated by LN during the import process.
  - In some External Scheduling Interfaces, the options must be modified to ensure that the next XML export is effective. **Note**: The regenerate process is used to recreate the XML file for the export process based on the LN data; the information that is not used by LN is deleted.
- **Task Name based on**
  You can use this option to meet the **Code** and **Description** requirements when customers include explanatory Activity codes and Budget Line Cost Objects; or if descriptions are used for Activities and Budget Line Cost Objects. For example, numbers are used for Activity codes and Budget Line Cost Objects.
- **Use LN Calendars**
  You can use this option to switch the process to export calendars, for example, if LN calendars are not relevant or are only required to test the XML code. When you use the option to exclude calendar information, XML files are smaller and issues in the calendar setup in LN can be avoided. **Note**: If the calendar must be exported again because the data is considered relevant, you must use the Regenerate option
- **Show Warnings**
  Use this option to display warnings if any issues occur during the import or export process. When you export a XML file, errors can occur during the ERP Enterprise setup or if data such as dates or conversion factors is missing. Using this option, you can easily identify these issues. **Note**: Using the application, you can override issues during the process by defining

assumed values. However, irrespective of the specified assumed values, all warnings are displayed at the end of the process. If warnings must not be displayed because the related issues are acceptable or if accurate data is redetermined in the External Scheduling Package, you can set the **Show Warnings** option to **No**. **Note**: By default, the errors are always displayed. Setting the **Show Warnings** option to **No** helps the user focus on resolving the errors.

- **Status information**
  Use this option to view the status of the import or export process. When a XML file is successfully exported, the *Synchronized by ERP Enterprise on <date/time>* message is displayed. If the export fails, the *XML Export failed* message is displayed. Based on this message, you can initiate the required actions to resolve this issue. **Note**: To avoid inconsistent data issues, the application blocks the import of an XML, until an export is successful.
- **Project Selection**
  Use the Project Selection (tppss2140m000) session to manage multiple projects that must be imported or exported from or to the external scheduling package (ESP). This allows the planner to update multiple projects simultaneously. A planner can be responsible for multiple projects and can use this session to specify the multiple projects that must be exported or imported.

Note

- In the External Scheduling Package, it is recommended that you use the 'Import as a new project' option. Also, the use of the Merge and Append options (for the same project or alternate project) is not recommended, as the source XML file includes dependencies and during the merge process may result in renumbering or deletion of important information.
- When you set up a new project in an external scheduling interface, you must follow the LN standards for a successful synchronization of the data. For example, in LN a project must only consist of one top activity, consequently the same structure must be implemented in the external scheduling interface.

Chapter 9
ESP project overview

9

ESP Project Overview

Use the ESP Project Overview (tppss2531m000) session to view the project data linked to the external scheduling package. You can view the activity information, ownership, and the project - connection node combinations. You can also view the projects that are scheduled for import, export, or both. The session can also be used to disconnect a project linked to the ESP. When you remove a link, a new link can be established. For example, you can use the connection node to link multiple external projects to the LN project.

Chapter 10
Mapping LN data to XML

10

Mapping LN Data to XML

Mapping fields are required to import and export XML files from or to an external scheduling package. The naming convention of the fields is different for Microsoft Project and LN.

To synchronize these fields according to the project standard and to avoid inconsistent data issues, you can refer to these examples:

Example

In Microsoft Project, Custom Text 1-30 fields are available to map non-standard Microsoft Project fields. In LN, these fields are used for Code/Description/Primary Key (Text2, Text3, Text1).

In Microsoft Project, the Task Name is mostly used as the Activity Description. Currently, in LN, the Activity Code/ Budget Line are used as the Task Name.

Solution:

These table fields are required in External Scheduling Projects (tppss231):

Field ID	Description
tppss231.tkbo	Task name based on (Code / Description) (default Code) The default option is Code. When LN projects exist in the ESP and an upgrade from LN 10.2.1 and 10.3 to 10.4 or beyond is performed, a SPT must be run to correct the option to Code. Note: The code option must be specified in SPT before installing the ESP.
tppss231.actx	Activity Code Custom Field Text; value 1-30 default 2

tppss231.adtx	Activity Description Custom Field Text; value 1-30 default 3
tppss231.aptx	Activity Primary Key Custom Field Text; value 1-30 default 1

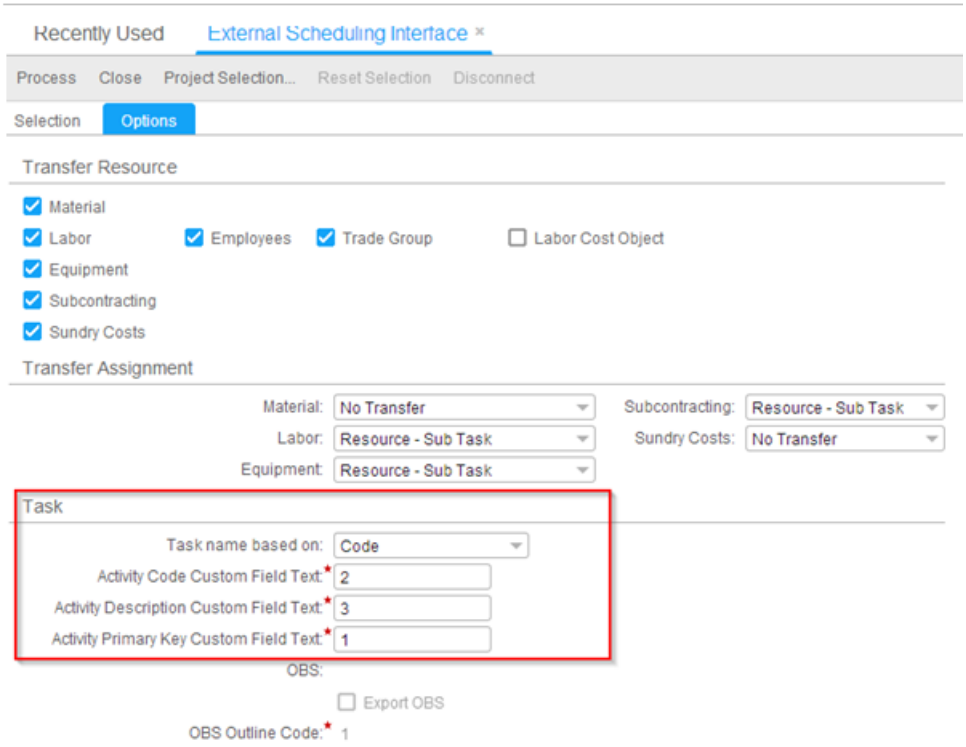
Note

For new Exports / Imports, the parameter values are used as the default values.

Requirements

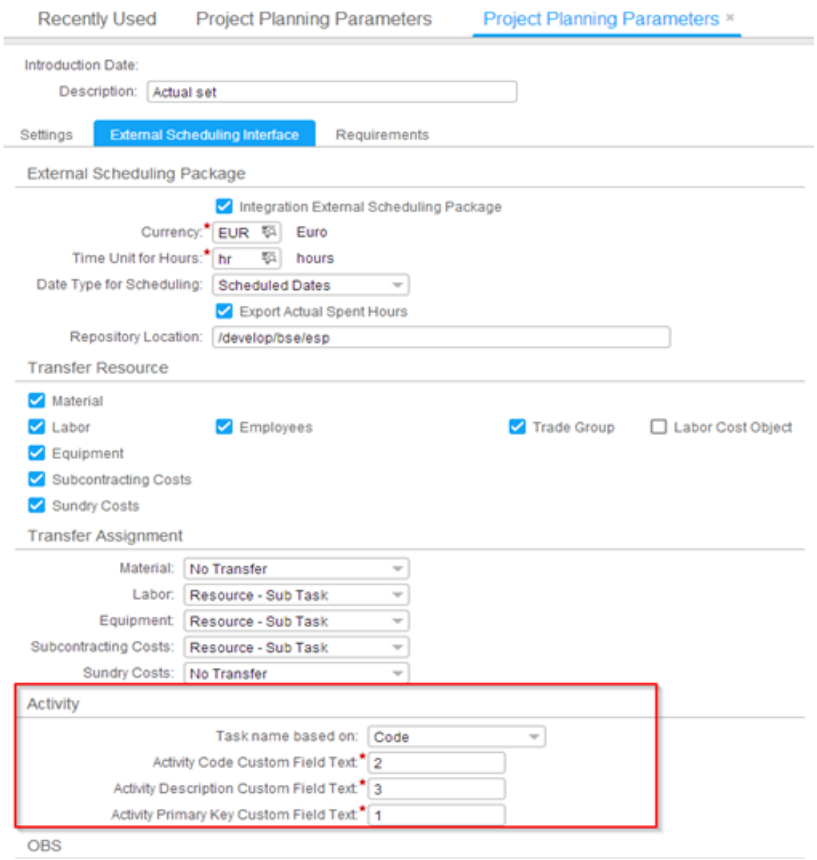
In LN, these conditions are applicable:

- Fields are mandatory.
- The value of the Activity Code Custom Field Text, Activity Description Custom Field Text, and Activity Primary Key Custom Field Text must be different
- For an import, especially of new projects and new lines, the Task Code in MS Project must be specified, either using a Task Name (if Task name is based on is set to Code) or a Text field.
- Fields can only be enabled for fresh new imports and exports that are regenerated.



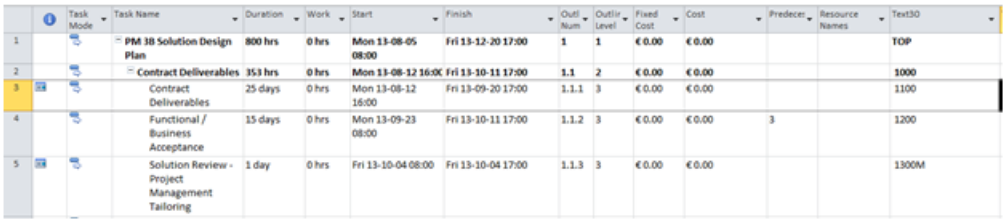
These are the mandatory table fields in Planning Parameters (tppss000):

Field ID	Description
tppss000.tkbo	Task name based on (Code / Description) (default Code) The default must be Code.
tppss000.actx	Activity Code Custom Field Text; value 1-30, default is 2
tppss000.adtx	Activity Description Custom Field Text; value 1-30, default is 3
tppss000.aptx	Activity Primary Key Custom Field Text; value 1-30, default is 1



Example

When you import the data to MS Project:



	Task Mode	Task Name	Duration	Work	Start	Finish	Outl Num	Outline Level	Fixed Cost	Cost	Predecessors	Resource Names	Text30
1		**PM 3B Solution Design Plan**	**800 hrs**	**0 hrs**	**Mon 13-08-05 08:00**	**Fri 13-12-20 17:00**	**1**	**1**	**€ 0.00**	**€ 0.00**			**TOP**
2		**Contract Deliverables**	**353 hrs**	**0 hrs**	**Mon 13-08-12 16:00**	**Fri 13-10-11 17:00**	**1.1**	**2**	**€ 0.00**	**€ 0.00**			**1000**
3		Contract Deliverables	25 days	0 hrs	Mon 13-08-12 16:00	Fri 13-09-20 17:00	1.1.1	3	€ 0.00	€ 0.00			1100
4		Functional / Business Acceptance	15 days	0 hrs	Mon 13-09-23 08:00	Fri 13-10-11 17:00	1.1.2	3	€ 0.00	€ 0.00	3		1200
5		Solution Review - Project Management Tailoring	1 day	0 hrs	Fri 13-10-04 08:00	Fri 13-10-04 17:00	1.1.3	3	€ 0.00	€ 0.00			1300M

The Task Name contains the Activity Description and the Custom Field Text30 contains the Activity Code. This can be configured in the External Scheduling Interface.

Data Mapping

This table describes the mapping of the LN fields with an external scheduling interface.

XML Task Elements	Mapping rule	Activities	Material	Subcon-tracting	Equipment	Labor	Sundry
Name/ Text2	parameter mapping	tppss200.cact	MAT.	SUB.	EQU.	LAB.	SUN.
		Activity					
			tpptc220.sern	tpptc250.sern	tpptc240.sern	tpptc230.sern	tpptc260.sern
			Sequence Nr				
			tpptc220.item	tpptc250.csub	tpptc240.ce-qu	tpptc230.task	tpptc260.ci-co
			Item				
Text3	parameter mapping	tppss200.de-sc	tcibd001.dsca	tp-pdm635.de-sc	tp-pdm625.de-sc	tp-pdm615.de-sc	tp-pdm640.de-sc
		Description	*Description*	*Description*	*Description*	*Description*	*Description*
				tp-pdm035.de-sc	tp-pdm025.de-sc	tp-pdm015.de-sc	tp-pdm040.de-sc
				Description	*Description*	*Description*	*Description*
Type		duration	work	work	work	work	work
Start		tppss200.ss-dt	tpptc220.rs-ta	tpptc250.rs-ta	tpptc240.rs-ta	tpptc230.rs-ta	tpptc260.rs-ta
		Scheduled Start Date	*Start Date*	*Start Date*	*Start Date*	*Start Date*	*Start Date*
Finish		tppss200.sfdt	tpptc220.rfin	tpptc250.rfin	tpptc240.rfin	tpptc230.rfin	tpptc260.rfin
		Scheduled Finish Date	*Finish Date*	*Finish Date*	*Finish Date*	*Finish Date*	*Finish Date*

Duration	refers to	tppss200.dura	tpptc220.dura	tpptc250.dura	tpptc240.dura	tpptc230.dura	tpptc260.dura
		Duration	*Duration*	*Duration*	*Duration*	*Duration*	*Duration*
		tppss200.tmud	tpptc220.tmud	tpptc250.tmud	tpptc240.tmud	tpptc230.tmud	tpptc260.tmud
		Time Unit Duration	*Time Unit Duration*	*Time Unit Duration*	*Time Unit Duration*	*Time Unit Duration*	*Time Unit Duration*
Milestone		tppss200.milst					
		Milestone					
Work	refers to			tpptc250.qutm	tpptc240.qutm	tpptc230.qutm	
				Amount of Time	*Amount of Time*	*Quantity*Norm*	
				tpptc250.quti	tpptc240.quti	tpptc230.quti	
				Time Unit	*Time Unit*	*Time Unit*	
EarlyStart		tppss200.esdt					
		Earliest Start Date					
EarlyFinish		tppss200.efdt					
		Earliest Finish Date					
LateStart		tppss200.lsdt					
		Latest Start Date					
LateFinish		tppss200.lfst					

		Latest Finish Date					
		tppss200.fref					
		Free Float					
		tppss200.totf					
		Total Float					
Percent-Complete		tppss200.pcom					
		Percentage Complete					
Cost	related to		tptc220.amoc	tptc250.amoc	tptc240.amoc	tptc230.amoc	tptc260.amoc
			Cost Amount	Cost Amount	Cost Amount	Cost Amount	Cost Amount
			tppss000.spcc	tppss000.spcc	tppss000.spcc	tppss000.spcc	tppss000.spcc
			External Scheduling Package Currency				
ActualStart		tppss200.asdt					
		Actual Start Date					
ActualFinish		tppss200.afdt					
		Actual Finish Date					
Constraint-		tppss200.cnst					

Type							
		Constraint Type					
Constraint-Date		tppss200.cnsd					
		Constraint Date					
Deadline		tppss200.ddln					
		Deadline Date					
Notes	refers to	tppss200.tx-ta	tpptc220.tx-ta	tpptc250.tx-ta	tpptc240.tx-ta	tpptc230.tx-ta	tpptc260.tx-ta
		Text	*Text*	*Text*	*Text*	*Text*	Text
OutlineLev-el	refers to	tppss200.pact	tpptc220.cact	tpptc250.cact	tpptc240.cact	tpptc230.cact	tpptc260.cact
		Parent Activity	*Activity*	*Activity*	*Activity*	*Activity*	*Activity*
		tppss200.levl	tppss200.levl+1	tppss200.levl+1	tppss200.levl+1	tppss200.levl+1	tppss200.levl+1
		Level Number					
Calen-darUID	refers to	tppss200.ccal	tpptc220.ccal	tpptc250.ccal	tpptc240.ccal	tpptc230.ccal	tpptc260.ccal
		Calendar	*Calendar*	*Calendar*	*Calendar*	*Calendar*	*Calendar*
		tppss200.avtp	avail type ui	avail type ui	avail type ui	avail type ui	avail type ui
		Availability Type	*Availability Type*	*Availability Type*	*Availability Type*	*Availability Type*	*Availability Type*

Text1	param mapping	LN Primary Key	LN Primary Key	LN Primary Key	LN Primary Key	LN Primary Key	LN Primary Key

Note

The highlighted text such as Calendar, Activity, or Duration are the table field descriptions.