

# User's Guide for Calendars

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### Publication Information

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<b>Document code</b>	U8746C US
<b>Release</b>	Infor ERP LN
<b>Publication date</b>	November 25, 2008

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# About this document

## Objectives

The objective of this guide is to describe the purpose of the Calendars and Periods module and how you can set up and use calendars, periods, recurrences, and patterns throughout ERP LN.

## Intended audience

This document is intended for persons working with master data in the Common Data, People, Project, Enterprise Planning, Order Management, Manufacturing, Warehouse Management, and Service packages . Financials uses its own entities to define the financial periods.

The intended audience can include implementation consultants, product architects, support specialists, and so on.

## Document summary

This document contains the following chapters:

- **Introduction**  
Provides an introduction to the role of the Calendars and Periods module, the central module where you can store calendar and timing data for use in other modules.
  - **Recurrences**  
Describes how to define and use recurrences. A recurrence is a repetitive pattern of dates, such as “Biweekly on Mondays and Fridays”, “The 27th of each month”, or “January 1st of each year”.
  - **Patterns**  
Describes how to define and use patterns. A pattern is a scheme defining the day of the month, the day of the week, and the time of the day you want an activity to be carried out.
  - **Calendars**  
Describes how to define and use calendars. Calendars define the working times or opening times over a large range of dates. You use calendars to define the working times of employees, work centers, and warehouses and information on the working dates and times of business partners, required to plan deliveries.
  - **Calendar integrations**  
Provides information on how to set up an integration between the Calendars and Periods module and external packages.
  - **Periods**  
Describes how to define and use periods. Periods divide a year into regular intervals, such as weeks, months, or quarters.
-

### How to read this document

This document was assembled from online Help topics. As a result, references to other sections in the manual are presented as shown in the following example:

For details, refer to *Introduction*. To locate the referred section, please refer to the Table of Contents or use the Index at the end of the document.

Terms that look like these words indicate a link to a glossary definition. If you view this document online, you can click the underlined term to go to the glossary definition at the end of the document .

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## Overview of calendars and periods

This topic presents an overview of the Calendars and Periods module.

In the Calendars and Periods module, you can define calendars and time patterns to use throughout the ERP LN packages.

### Concepts

In the Calendars and Periods module, you can define the following types of data, for use in other parts of ERP LN:

- [Recurrences](#)
- [Patterns](#)
- [Calendars](#)
- [Periods](#)

The following table describes each of these concepts.

Concept	Description
Recurrence	<p>A recurrence is a repetitive pattern of dates, such as “Biweekly on Mondays and Fridays”, “The 27th of each month”, or “January 1st of each year”.</p> <p>Recurrences are used to build patterns and calendars.</p> <p>In the People package, you can use recurrences in <a href="#">assignments</a>.</p>
Pattern	<p>A pattern is a scheme defining the day of the month, the day of the week, and the time of the day you want an activity to be carried out. Patterns are defined by using a combination of recurrences, exceptions, and times of day.</p>

The Order Management and Enterprise Planning packages use patterns to define delivery moments, shipping moments, and fixed delivery patterns.

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**Calendar**      Calendars define the working times or opening times over a large range of dates. Calendars can also store efficiency-related and capacity-related data.

You use calendars to define the working times of employees, work centers, and warehouses and information on the working dates and times of business partners, required to plan deliveries.

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**Period**      Periods divide a year into regular intervals, such as weeks, months, or quarters.

You use periods for statistical, financial, hours accounting, planning, and cost controlling purposes, especially in the Order Management and Project packages.

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## Dependencies

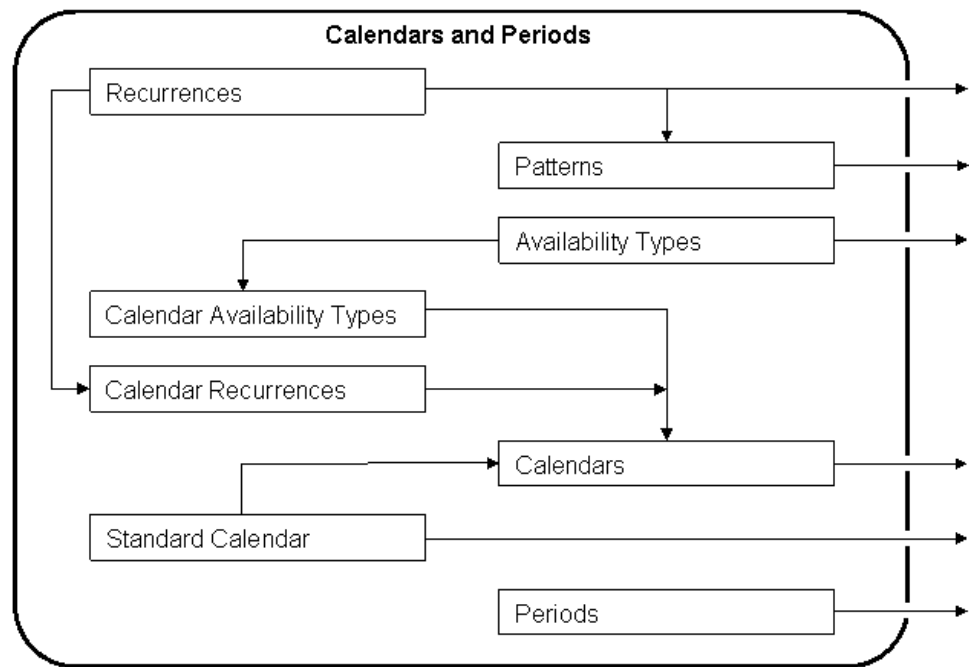
To help you understand the structure of this module, some of the dependencies between the concepts are described below:

- A pattern is based on one or more recurrences.
- Calendars are based on availability types and calendar recurrences. A calendar recurrence is based on one or more recurrences.

For dates with no available information, the calendar falls back on the standard calendar.

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In the following simplified diagram, the outward pointing arrows represent information that is made available outside Calendars and Periods.



Simplified diagram of relationships within Calendars and Periods

### To use the data

For more information on the use of the data defined in this module, refer to *Relationships between CCP and other modules (p. 1-4)*.

For integrations with external scheduling packages, refer to *Calendar integration with external scheduling packages (p. 5-1)*.

### To set up the data

For more information on the setup of data in this module, refer to the following topics:

- *To define recurrences (p. 2-1)*
- *To define patterns (p. 3-1)*
- *Overview of calendar functionality (p. 4-1)*
- *To set up periods (p. 6-1)*

## Relationships between CCP and other modules

The data defined in the Calendars and Periods module is used in the following ERP LN packages and modules:

- **Recurrences**

People uses recurrences for employees' assignments in the Assignments (bpmdm0130m000) session.

- **Patterns**

Order Management uses patterns for the schedule issue dates for material release and shipping schedule. For more information, refer to Overview of purchase schedule handling.

Order Management also uses patterns as delivery patterns linked to warehouses, buy-from business partners and ship-from business partners, and items. For more information, refer to To use planned delivery moments.

Enterprise Planning uses patterns as fixed delivery patterns. In a vendor managed inventory (VMI) situation, you can specify the applicable pattern in the Terms and Conditions module. For more information, refer to Fixed deliveries in Enterprise Planning

- **Calendars**

In the Enterprise Modeling Management module in Common Data, you can define the calendar of companies (company calendar) and enterprise units.

In the People module, you can link calendars to teams of employees.

The Time Management module in the People package uses this information to get the default number of hours from the calendar lines.

In Common Data, you can link calendars to business partners and addresses; the Order Management package uses this information when planning goods transfers.

In Manufacturing, you can link calendars to work centers. The work centers' working times determine the available production capacity.

In Warehouse Management, you can link calendars to warehouses.

In Service, you use calendars to specify when a cluster is available for servicing and to define when a service department is available to perform service activities.

- **Availability types**

Every calendar has one or more availability types. Usually, for each package you can specify which of the calendars' availability types applies to that package.

In Service, you can assign a separate availability type to each service type. Here, every availability type indicates the employee's available time for each activity.

In Enterprise Planning, you can assign availability types to scenarios; with this, you can simulate a reduced or increased production capacity.

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■ **Periods**

The Commissions and Rebates module in Order Management uses periods to calculate the commissions for sales representatives and agents, and the rebates for customers.

The Purchase Control module in Order Management uses periods for purchase schedules.

The Purchase Statistics and Sales Statistics modules in Order Management use periods for statistical analyses.

The Repetitive Manufacturing module in Manufacturing uses periods to organize repetitive production processes.

The Project Production Control module in Project uses periods to define cost-control periods.

People uses periods for budgeting and hours accounting.

**Note**

Financials does not use Calendars and Periods. Financials uses its own entities to define the financial periods.

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## To define recurrences

### Procedure

To define a recurrence, complete the following steps:

1. Start the Recurrences (tcccp0143m000) session.
2. Insert a new recurrence.  
In the **Recurrence Type** field, select the base period on which the recurrence frequency is defined. This field can be **Yearly**, **Monthly**, **Weekly**, or **Daily**.  
In the **Recurrence Start Date** and **Recurrence End Date** fields, define the range of dates in which the recurrence is valid. For information on how to extend the validity of a recurrence, refer to *Rolling recurrence (p. 2-2)*.
3. To open the Recurrence Details (tcccp0143s000) session, double-click the recurrence.
4. Enter the recurrence details. For more information, refer to the online Help for the session.

You can define the following types of recurrences:

- **Yearly**  
If the **Recurrence Type** field is **Yearly**, the recurrence repeats itself after one or more years.  
You can select dates with the following methods:
  - Specify the set of months and the date of the month. For example, the 5th of the month of November, December, January, and February.
  - Specify the set of months and the day of the week, such as Friday, and specify whether the first, second, third, fourth, or last of the month is selected. For example, the last Wednesday of February and August.
- **Monthly**  
If the **Recurrence Type** field is **Monthly**, the recurrence repeats itself after one or more months.

You can select dates with the following methods:

- Specify the day of the week, such as Friday, and specify whether the first, second, third, fourth, or last of the month is selected. For example, the last Wednesday of the month.
- Specify the set of dates of the month. For example, the 10th, 20th, and 30th of the month.
- **Weekly**  
If the **Recurrence Type** field is **Weekly**, the recurrence repeats itself after one or more weeks.  
Specify the relevant days of the week. For example, every Sunday and Saturday.
- **Daily**  
If the **Recurrence Type** field is **Daily**, the recurrence repeats itself after one or more days. For example, every 40 days.

#### Note

If you specified day 31, and a month has less than 31 days, ERP LN selects the last day of that month.

If you specified day 29 or 30, and February is included, ERP LN selects the last day of February.

## To use recurrences

You can use recurrences for two purposes:

- As building blocks to create calendar recurrences, which you use to define calendars. For more information, refer to *To define a calendar (p. 4-10)*.
- To define employees' assignments in the Assignments (bpmdm0130m000) session in People.

## Rolling recurrence

This topic describes how to extend the life of a recurrence by making it a rolling recurrence.

A recurrence has a defined start date and end date, between which the recurrence functions. If the recurrence is a rolling recurrence, you can always reuse the same recurrence definition. Whenever you roll the recurrence, the recurrence's start date and end date are moved forward a specified length of time.

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## Example

Suppose the recurrence start date is January 1, 2009 and the end date is January 1, 2011.

If you roll the recurrence 51 weeks forward, the result is as follows:

	Recurrence Start Date	Recurrence End Date
Before rolling	2009-01-01	2011-01-01
After rolling	2009-12-24	2011-12-24

Later in this topic, this example is explained in detail.

## The rolling process

### Amount of time to shift

If a recurrence is rolled, ERP LN shifts the recurrence's start date, end date, and reference date forward by a specific amount of time.

The amount of time by which ERP LN shifts these dates forward is calculated according to the following formula:

$$A = B * F * I$$

The codes in the formula are defined as follows:

- A- Amount of time shifted.
- B- Length of time specified by the **Recurrence Type**, such as **Weekly**.
- F- **Frequency**, which is the number of days, weeks, months, or years after which the pattern repeats itself.
- I- The value of the **Roll after** field, also called the **Interval(s)** field.

### Note

If the recurrence type is **Monthly**, ERP LN ensures the recurrence *start date* shifts to the same date of the month.

For example, if the old start date is March 30, and the recurrence shifts 3 months, the start date becomes June 30. This shift amounts to 92 days.

If the old end date is September 1, the end date is also shifted 92 days, and becomes December 2.

**Moment of rolling**

The rolling process can only start if the **Reference Date** field in the Recurrence Details (tcccp0143s000) session is so far back in the past that the reference date does not shift to a future date. Therefore, if the recurrence is rolled at the earliest possible opportunity, the rolling process shifts the reference date to the current date.

To initiate the rolling process, choose one of the following methods:

- Update a calendar that is based on the rolling recurrence. To update a calendar, use the Update Calendars (tcccp0226m000) session.
- Roll the recurrence during the generation of pattern moments:
  - a. Start the Generate Pattern Moments (tcccp0295m000) session.
  - b. Select pattern or a range of patterns.
  - c. Select the **Roll Recurrence** check box.
  - d. To start generating pattern moments, click **Generate**.
- Manually roll the recurrence:
  - a. Start the Recurrences (tcccp0143m000) session.
  - b. To start the Recurrence Details (tcccp0143s000) session, double-click a recurrence.
  - c. Click **Roll Recurrence**.

**Note**

If People retrieves dates from a recurrence to create assignments, ERP LN does not automatically roll the recurrence.

**Note**

The rolling process shifts the reference date to the recent past or current date. If the reference date is far in the past, the rolling process is automatically repeated as often as possible without shifting the reference date to a future date.

**Example**

This example is the same as the previous example, but now more details are included.

Suppose a recurrence is defined as follows:

- **Recurrence Start Date** = 2009-01-01
- **Recurrence End Date** = 2011-01-01
- **Reference Date** = 2009-04-01

The recurrence type is **Weekly**, with a frequency of 1.

The **Roll after** field, also called the **Interval(s)** field, is 51. Therefore, the recurrence must shift 51 weeks.

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The earliest opportunity to roll the occurrence is 51 weeks after the reference date, on March 24, 2010.

Suppose you roll the recurrence on March 24, 2010. The following table shows the effects.

	<b>Recurrence Start Date</b>	<b>Reference Date</b>	<b>Recurrence End Date</b>
Before rolling	2009-01-01	2009-04-01	2011-01-01
After rolling	2009-12-24	2010-03-24	2011-12-24



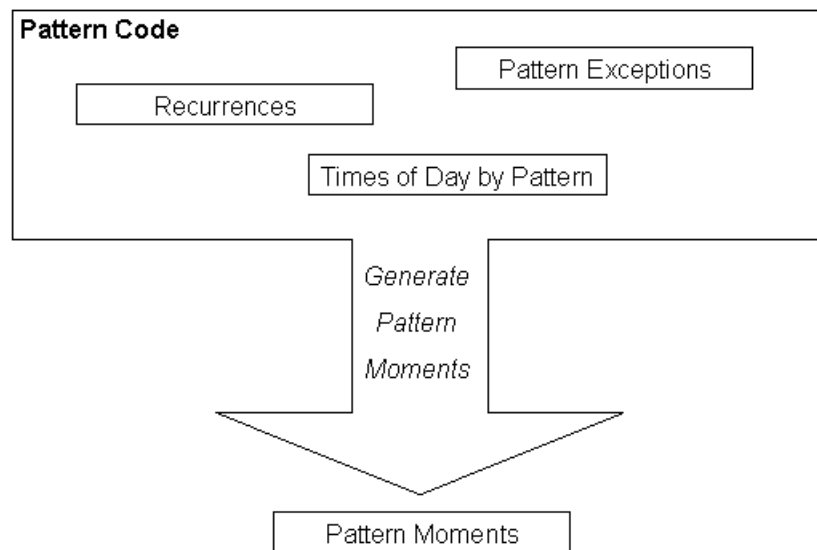
### To define patterns

#### Prerequisites

Before you define a pattern, you must define the recurrences on which the pattern is based. For more information, refer to *To define recurrences (p. 2-1)* .

#### To create patterns

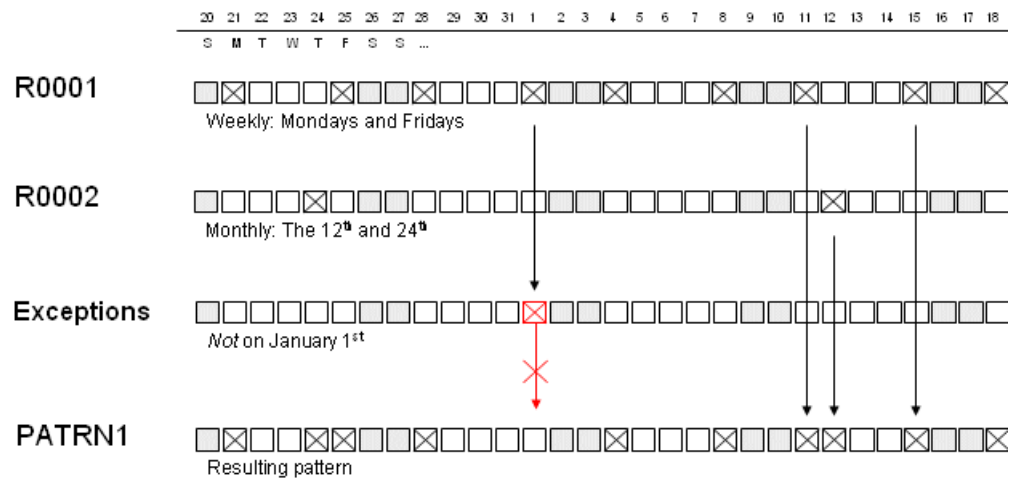
A pattern consists of pattern moments based on one or more recurrences, pattern exceptions, and times of day, as shown in the following diagram:



Generating a pattern's pattern moments.

## To combine recurrences

You can combine multiple recurrences, as shown in the following diagram:



Combining recurrences and exceptions into a pattern.

In this diagram, pattern PATRN1 is based on two recurrences: R0001 and R0002.

- Recurrence R0001 selects every Monday and Friday.
- Recurrence R0002 selects the 12th and 24th of every month.

PATRN 1 has one exception, which excludes January 1st of every year.

## Procedure

To define a pattern, complete the following steps:

1. Define recurrences. For more information, refer to *To define recurrences* (p. 2-1) .
2. Use the Patterns (tcccp0190m000) session to define a pattern code.
3. Use the Recurrences by Pattern (tcccp0191m000) session to add the recurrences to the pattern.
4. Use the Times of Day by Pattern (tcccp0193m000) session to specify the times of day. Times are defined as local times; the time zone is unspecified.
5. Use the Pattern Exceptions (tcccp0192m000) session to specify any exceptions you require.
6. Use the Generate Pattern Moments (tcccp0295m000) session to generate the pattern moments.

To view the generated pattern moments, use the Pattern Moments (tcccp0195m000) session.

## To use patterns

This topic describes where and how patterns are used.

### Patterns for purchase scheduling

To organize regular shipments of a purchased item from a fixed supplier, you can use purchase schedules.

Order Management uses patterns for the schedule issue dates for material release and shipping schedule. For more information, refer to Overview of purchase schedule handling.

### Patterns for fixed delivery patterns

To specify that all deliveries to your company must be made at specific times on specific dates, such as every Monday at 11:00 am, you can create fixed delivery patterns. Fixed delivery patterns are based on the patterns you define in the Calendars and Periods module.

In Order Management, you can link patterns to warehouses, buy-from business partners and ship-from business partners, and items. For more information, refer to To use planned delivery moments.

Enterprise Planning uses these patterns in the planning of planned orders.

In a vendor managed inventory (VMI) situation, you can specify the applicable pattern in the Terms and Conditions module.

For more information, refer to Fixed deliveries in Enterprise Planning

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### Overview of calendar functionality

This topic provides an overview of the calendar functionality of ERP LN.

A calendar in ERP LN establishes the times that resources are available for work.

For example:

- Production orders can be planned on work center AA from 6 A.M. until 5 P.M.
- Sales orders can be picked and dispatched from warehouse XY from 7 A.M. until 6 P.M.

In the Calendars and Periods module, you can define and organize calendars for all parts of ERP LN.

### Calendar structure

You can use the calendars in ERP LN in a flexible way. You can choose to define one calendar for the whole company so that everything in the company is planned according to the times of that calendar. However, you can also define calendars for a variety of resources such as work centers, sales offices, and employees, so that all resources have their own times defined that are used in planning.

Calendars have a hierarchical structure. Every calendar can have a parent calendar that provides the default data for that calendar. In this way, you only need to specify the exceptions to the parent calendar. For more information, refer to *Calendar hierarchy* (p. 4-13) .

You can link calendars to various levels of your organization. The company calendar is the most general calendar. You can link more specific calendars to enterprise units, departments, work centers, warehouses, and employees. The company calendar defines working days, holidays, and working times for your entire organization. For delivery planning, you can link calendars to business

partners and addresses. For more information, refer to *To use calendars (p. 4-15)*.

## Availability types

A calendar can have multiple availability types. For each availability type, the calendar can have different working times and other details. Availability types can be regarded as different versions of a calendar, with which you can store multiple sets of working times into a single calendar. Therefore, you can categorize the availability of resources according to different activities. For more information, refer to *Availability types (p. 4-3)*.

## Implementation phase

During implementation of ERP LN, you must define the following basic calendar data:

- Availability types
- Working hours types
- The standard calendar
- The company calendar

In theory, it is sufficient to define a standard calendar in the Standard Calendar (tcccp0140m000) session, and to specify a company calendar in the Companies (tcemm1170m000) session. However, in practice, the option to only use these two calendars limits the planning facilities. As the complexity of your business structure increases, you must define more calendars with multiple availability types and working hours types.

If you share the calendar tables between the companies of a multicompany structure, the first day of the week must be the same for all the companies. For example, if one company defines the first day of the week as Sunday and another company defines it as Monday, you cannot share the calendars. To display the first day of the week, use the Companies (ttaad1100m000) session.

## Calendar data

For each working time interval within a date that you include in a calendar, you can specify the following details:

- Start time and end time
  - Working hours type (optional)
  - Efficiency factor.
  - Capacity percentage
  - Overtime.
-

## Availability types

### Concept

A calendar can have multiple availability types. For each availability type, the calendar can have different working times and other details. Availability types can be regarded as different versions of a calendar, with which you can store multiple sets of working times into a single calendar. Therefore, you can categorize the availability of resources according to different activities.

All calendar data, such as working times and efficiency factors, is specified for a combination of calendar code and availability type.

### Example

A company has the following standard working times:

- Production runs from 8.00 to 18.00.
- Warehouses are open from 8.00 to 16.00.
- The service department is active from 9.00 to 18.00.

You can model this situation with a single calendar for which you define three availability types: PRD (Production), WHS (Warehouse), and SRV (Service).

### Example

A work center is planned for manufacturing activities and for service maintenance activities.

You can model this situation with a single calendar for which you define two availability types: PRD (Production), and SRV (Service).

Generally, you can specify for each package which of the calendars' availability types applies to that package. Some packages use more availability types.

#### Note

External scheduling packages cannot use multiple availability types. If you integrate with an external scheduling package, you must define a separate calendar for each activity. For more information, refer to *Calendar integration with external scheduling packages* (p. 5-1) .

## To define availability types

To define availability types, use the Availability Types (tcccp0101m000) session.

To make a new availability type suitable for use outside Calendars and Periods, complete the following steps:

1. To link the availability type to a calendar, use the Calendar Recurrences (tcccp0144m000) session.
2. To define the calendar details for the new availability type, complete the steps in *To define a calendar* (p. 4-10)

To make a particular day unavailable for a particular availability type, clear the **Available** check box for that availability type on the corresponding day in the Calendar Working Hours (tcccp0120m000) session.

To view the calendar codes to which an availability type has already been linked, start the Calendar Recurrences (tcccp0144m000) session, and sort the records by availability type. To sort the records by availability type, on the **View** menu, point to **Sort by**, and then click **Availability Type, Calendar Code**.

## To use availability types

Availability types are used in various ERP LN packages.

### Service

In Service, you can assign a separate availability type to each service type. Here, every availability type indicates the employee's available time for each activity.

### Enterprise Planning

In Enterprise Planning, you can assign availability types to scenarios; you can then simulate a reduced or increased production capacity.

The EP Parameters (cprpd0100m000) session displays the availability types for Routing, Purchase Control, Warehouse Management, and the value of the **Availability Type for Carrying Goods** field in the COM Parameters (tccom0000s000) session.

For more information, refer to Availability types in Enterprise Planning.

### Project

Project uses external scheduling packages for employee planning and equipment planning. However, the external scheduling package retrieves the calendar data from Calendars and Periods in ERP LN.

In the CCP Parameters (tcccp0100m000) session, in the **Default Availability Type for ESP** field, enter the default value for the availability type for external scheduling packages.

To make more availability types available to external scheduling packages, use the Calendar Selection for External Scheduling Packages (tcccp0181m000) session.

For more information, refer to *Calendar integration with external scheduling packages (p. 5-1)*.

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### Other packages

For more information on the use of availability types in other packages, refer to *To use calendars* (p. 4-15) .

## Efficiency factors

ERP LN uses efficiency factors to take into account variable daily capacity for lead-time calculation.

Various reasons can exist for variability in daily capacity: reduction of work force in the holiday season, or hiring extra work force in busy periods means that there is more or less plan time available on a specific day.

The default value of the efficiency factor is 1.0.

### To define the efficiency factor

You can define efficiency factors when you set up a calendar in the Calendars and Periods module of Common Data.

The following table shows several ways to define efficiency factors:

To do this...	Use this session...
To define a default efficiency factor for a <u>work-ing hours type</u>	Working Hours Types (tcccp0103m000)
To define the default efficiency factor for a particular day of the week	Standard Calendar (tcccp0140m000)
To define an efficiency factor at recurring dates	Calendar Recurrences (tcccp0144m000)
To overwrite a default efficiency factor on a particular date	Calendar Working Hours (tcccp0120m000)
To change the efficiency factors for multiple calendars and <u>availability types</u>	Update Efficiency Factor and Capacity (tcccp0225m000)

After you change the efficiency factor, you must update the calendar. Use one of the following methods:

- Run the Update Calendars (tcccp0226m000) session.

- In the Calendar Working Hours (tcccp0120m000) session, click **Update Calendar**.

After you changed the efficiency factor, update the calendar by using the Update Calendars (tcccp0226m000) session, or by clicking **Update Calendar** in the Calendar Working Hours (tcccp0120m000) session.

To view the effective availability factor on particular dates, use the Calendar Working Hours (tcccp0120m000) session. Remember to update the calendar.

### To use efficiency factors

ERP LN uses efficiency factors for the following purposes:

- To take into account that resources can sometimes work more efficient than the average. For example, if a particular employee works harder in the morning than in the afternoon, you can enter an efficiency factor of 1.1 for the calendar line with time interval 09:00 - 12:00.
- To take into account that, if you hire additional resources to perform the work, the lead time of operations shortens.

#### Note

Do not confuse efficiency factors with capacity percentages.

- Efficiency factors affect the lead-time calculation for which the corresponding calendar is used. In other words, these factors influence the speed at which the work is carried out.
- Capacity percentages provide information about the utilization rate of a resource.

## Capacity percentage

You can use the capacity percentage to vary the available capacity of work centers by day or by shift. For example, if the night shift works with less people than the day shift in a work center, you can reduce the capacity percentage for the night shift. The default capacity percentage is 100 %. ERP LN applies the capacity percentage in the calculation of work center utilization views and reports.

#### Note

The value of the capacity percentage does not affect lead-time calculations.

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## Calculations

In the Calendar Working Hours (tcccp0120m000) session, the **Capacity Details** tab contains the following fields:

- **Hours**
- **Capacity Percentage**
- **Capacity [Hrs]**

The **Hours** field is based on the **Start Time** and **End Time** fields. The **Capacity [Hrs]** is based on the **Hours** field and the capacity percentage. The **Capacity [Hrs]** field is input for the available hours in the work center utilization views and reports.

### To define the capacity percentage

In the Working Hours Types (tcccp0103m000) session, you define a working hours type's capacity percentage.

The working hours type's capacity percentage serves as default in the Standard Calendar (tcccp0140m000) session and the Calendar Recurrences (tcccp0144m000) session.

The Calendar Working Hours (tcccp0120m000) session displays the effective capacity percentage that ERP LN uses to calculate capacity utilizations. You can manually change the capacity percentage.

### To define the standard calendar

In the standard calendar, you can define the working times for each day of the week. The standard calendar is the parent calendar on top of the calendar derivation structure. ERP LN uses the standard calendar as a week template for each calendar.

To view and maintain the standard calendar, use the Standard Calendar (tcccp0140m000) session.

#### **Properties of the standard calendar**

The standard calendar is infinite, and ERP LN uses its settings as a default for time periods that fall outside the time range of more specific calendars.

The standard calendar can have different working times for each availability type. In other words, the availability types can be regarded as different versions of the standard calendar.

For each day of the week, you can define combinations of availability types and working hours types.

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**Note**

If you share the calendar tables between the companies of a multicompany structure, the first day of the week must be the same for all the companies. For example, if one company defines the first day of the week as Sunday and another company defines it as Monday, you cannot share the calendars.

## Prerequisites

Before you can define the standard calendar, you must define availability types. For more information, refer to *Availability types* (p. 4-3) .

We recommend that you define working hours types. Working hours types provide default data for calendars.

## Procedure

To define the standard calendar, use the Standard Calendar (tcccp0140m000) session.

As with regular calendars, you must specify the following calendar data:

- Working hours type; the working hours type retrieves the default data.
- Working time (start time and end time).
- Capacity percentage; for more information, refer to *Capacity percentage* (p. 4-6) .
- Efficiency factor; for more information, refer to *Efficiency factors* (p. 4-5) .
- Overtime indicator.

## To set up the calendar structure

This topic describes how to set up calendars.

For an overview of the functionality, refer to *Overview of calendar functionality* (p. 4-1) .

## Overview of the procedure

To set up a calendar, complete the following steps:

1. In the Availability Types (tcccp0101m000) session, define availability types.
  2. In the Working Hours Types (tcccp0103m000) session, define working hours types.
  3. In the Standard Calendar (tcccp0140m000) session, define the standard calendar for the seven days of the week.
-

4. Define the calendar code and calendar details. For detailed instructions, refer to *To define a calendar (p. 4-10)*.
5. Assign the calendar to your resources and business partners.

## Detailed procedure

To set up a structure of calendars, completes the following steps:

### Step 1: Define availability types.

Use the Availability Types (tcccp0101m000) session to define availability types. The **Default Available** check box determines the default setting for the **Available** field in the Calendar Recurrences (tcccp0144m000) session.

For more information, refer to *Availability types (p. 4-3)*.

### Step 2: Define working hours types.

To define a working hours type, use the Working Hours Types (tcccp0103m000) session. You use working hours types to store default values of working times, capacity percentages, efficiency factors, and an indication of whether the time is overtime.

### Step 3: Define the standard calendar.

To define the defaults for each day of the week for the relevant availability types, use the Standard Calendar (tcccp0140m000) session. The standard calendar supplies default information, such as working hours and efficiency factors for each day of the week.

For more information, refer to *To define the standard calendar (p. 4-7)*.

### Step 4: Define the calendar.

Define calendars as described in *To define a calendar (p. 4-10)*. Before you define a particular calendar, you must first define that calendar's parent calendar. It is highly recommended to define the company calendar first.

### Step 5: Assign the calendars to resources.

You can use the following sessions to link the calendars to various resources:

- Companies (tcomm1170m000)
  - Departments (tcmcs0565m000)
  - Work Centers (tirou0101m000)
  - Warehouses (whwmd2500m000)
  - Business Partners (tccom4500m000)
  - Addresses (tccom4530m000)
-

- Employees - General (tccom0101m000)
- Teams (tcppl0140m000)

### To update calendars

To reflect changes in the working hours types, efficiency factors, or any other settings in the Calendar Working Hours (tcccp0120m000) session for all derived calendars, use the Update Calendars (tcccp0226m000) session. For example, if the working hours type for the morning shift is defined from 08:00 hrs to 12:00 hrs, and you change it to 09:00 - 13:00 hrs, you must update the calendar.

You can use the Update Efficiency Factor and Capacity (tcccp0225m000) session to change the value of the efficiency factor or the capacity percentage for a range of calendars for a specific time period, and update the time and capacity details for the selected calendars according to the new values. The Calendar Working Hours (tcccp0120m000) session reflects the results of the update.

### To define a calendar

This topic describes how you can define a single calendar. For information on the overall procedure for the definition and use of calendars, refer to *To set up the calendar structure (p. 4-8)*.

### Prerequisites

Before you can define a calendar, the following data must have been defined:

- Availability types.
- Working hours types (optional, but recommended).
- The standard calendar.

For more information on these prerequisites, refer to *To set up the calendar structure (p. 4-8)*.

### Procedure

#### Step 1: Define the calendar code

To define a calendar code, start the Calendar Codes (tcccp0110m000) session.

Important fields are as follows:

- **Parent Calendar**  
Either enter a parent calendar for your calendar or leave the field empty. If the **Parent Calendar** field is empty, ERP LN falls back on the standard
-

calendar to fill in missing dates. For more information, refer to *Calendar hierarchy* (p. 4-13) .

- **Calendar Start Date and Calendar End Date**

Specify the period for which this calendar has hours and capacity details.

A calendar's start date cannot be earlier than its parent's start date and a calendar's end date cannot be later than its parent's end date.

For performance reasons, set up a period of less than five years.

## **Step 2: Specify calendar availability types**

Start the Calendar Availability Types (tcccp0150m000) session and specify the availability types for which you can use the calendar code.

After this step, you have set up a calendar with availability dates that you can view in the Calendar Working Hours (tcccp0120m000) session. Now, all of this calendar's data is derived from the parent calendar or the standard calendar. In the next steps, you can specify the differences between this calendar and its parent calendar.

## **Step 3: Define the recurrences**

To define recurrences that specify recurring dates, which you will need in the next step, use the Recurrences (tcccp0143m000) session.

For more information, refer to *To define recurrences* (p. 2-1) .

## **Step 4: Specify calendar recurrences**

To define recurring exceptions to the calendar data derived from higher-level calendars, use calendar recurrences.

The following types of exceptions can be defined by using calendar recurrences:

- You can change working times, efficiency factors, capacity percentages, and overtime indications for particular dates.
- You can add recurring extra available dates. For example, a specific work center might be open during nights.
- You can designate dates as *unavailable*, such as, yearly holidays.

To define calendar recurrences, take the following steps:

1. Start the Calendar Recurrences (tcccp0144m000) session.
  2. Find the relevant calendar code and availability type.
  3. Insert the applicable recurrence.
  4. Enter values in the following fields:
    - **Available**
    - **Working Hours Type** (optional)
-

- **Start Time and End Time**
- **Capacity Percentage**
- **Efficiency Factor**
- If this working time is overtime, select the **Overtime** check box.

5. If required, insert more recurrences.

To define a lunch break, enter the recurrence twice, once with the morning hours, and once with the afternoon hours.

### Step 5: Enter unavailable days

To set incidental unavailable days, such as a holiday or a department trip, use the Calendar Non-Available Days (tcccp0119m000) session.

### Step 6: Make manual changes

To manually change the availability data for particular dates, use the Calendar Working Hours (tcccp0120m000) session. To view the total result, which includes changes you have made, click the **Update Calendar** button or select this command on the **Specific** menu.

#### Note

On one date, a calendar can have multiple working times, such as 8:00-12:00 and 13:00-17:00. However, you cannot have multiple time intervals on one date that are derived from disparate sources. For more information, refer to *Calendar hierarchy* (p. 4-13) .

#### Tip

- The Calendars and Periods module provides several ways to specify unavailability on particular dates or times; for more information, refer to *To define unavailability* (p. 4-14) .
  - To quickly define a new calendar that is similar to an existing calendar, use the Copy Calendar Details (tcccp0222m000) session to copy calendar details from that previously defined calendar to a new calendar code.
  - To quickly define a calendar in which all weeks have similar calendar data, complete the definition of the first week and then use the Copy Calendar Details (tcccp0222m000) session to copy that week pattern to other weeks.
  - To set the efficiency factor or the capacity percentage for a range of dates, use the Update Efficiency Factor and Capacity (tcccp0225m000) session.
  - To delete calendar details, use the Delete Calendar Details (tcccp0223m000) session.
-

## Calendar hierarchy

This topic describes how calendars are structured hierarchically.

Every calendar can have a parent calendar that provides the default data for that calendar. In this way, you only need to specify the exceptions to the parent calendar. Additionally, if a planning process queries a calendar for a date that is outside the range of that calendar's start date and end date, ERP LN uses information from the parent calendar.

To set up the calendar structure, first define the most generic calendar. As you define more specific calendars, in the Calendar Codes (tcccp0110m000) session, in the **Parent Calendar** field, enter the code of the calendar's parent calendar. You can then use that child calendar as the parent calendar for another calendar, and so on. When you update the calendar, ERP LN displays the full calendar details in the Calendar Working Hours (tcccp0120m000) session, including the calendar details derived from higher-level calendars.

In a child calendar, you can add additional working times and mark particular dates as unavailable.

To view the calendar hierarchy in a graphical browser, use the Browse Calendars (tcccp0550m100) session.

### Note

Although it is convenient to put the company calendar at the top of the derivation path, you can also select another calendar code as the top of the derivation path.

## Start date and end date

A child calendar cannot extend outside the time frame of its parent. Therefore, you cannot set a child calendar's start date *earlier* than the parent calendar's start date and you cannot set the child calendar's end date *later* than the parent calendar's end date.

However, you can define a calendar that is only valid for a part of the validity of the parent calendar. If a planning process needs calendar details for a date before the calendar's start date or after the calendar's end date, ERP LN uses the parent calendar's details.

If a calendar has no parent, and a planning process requires calendar details for a date outside the calendar's validity, ERP LN falls back on the standard calendar.

## Calendar working times

In the Calendar Working Hours (tcccp0120m000) session, you can see the effective calendar details for each date. If the details for a specific date have

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been derived from a parent calendar or the standard calendar, the **Derived From** field reads **Parent** or **Standard Calendar**.

On one date, a calendar can have multiple working times, such as 8:00-12:00 and 13:00-17:00. However, you cannot have multiple time intervals on one date that are derived from disparate sources. For *one particular date* in a calendar, only one of the following statements can be true:

- All of the working times are derived from the standard calendar.
- All of the working times are derived from the parent calendar.
- All of the working times are derived from a calendar recurrence.
- The date is unavailable, as specified in the Calendar Non-Available Days (tcccp0119m000) session.
- *All* of the working times for that date are manually defined in that calendar.

If you try to insert additional working times to a date that already has derived working times, ERP LN gives you the following choices:

- Copy the derived working hours for that date to the child calendar and set the **Derived From** field to **Manual** for these working hours.
- Delete the derived working hours in the child calendar.
- Abort the insert operation.

## Calendar search path

If a planning process cannot find the calendar for a particular employee or other resource, ERP LN searches for a calendar defined for the department, enterprise units, and finally the company calendar. Every planning process uses a fixed search path for calendars defined by the ERP LN application. That search path always ends at the company calendar and is independent from the parent calendars you defined for calendars.

## To define unavailability

This topic describes how you can define the temporary unavailability of resources in a calendar.

To model unavailability in a calendar, you can use one of the following sessions:

- **Recurring unavailability**  
To model recurring unavailability, such as national holidays, define the recurrence by using the Recurrences (tcccp0143m000) session. Then, add that recurrence to the applicable calendar and availability type by using the Calendar Recurrences (tcccp0144m000) session, and clear the **Available** check box for the unavailable days.
-

The advantage of calendar recurrences is that you can define recurring exceptions in a calendar, and set a time schedule for daily, weekly, monthly, or yearly unavailable time in one action.

- **Unavailable days for all availability types**

To define occasional unavailability, such as a department trip, use the Calendar Non-Available Days (tcccp0119m000) session. What you define here applies to all availability types.

- **Unavailable days for a specific availability type**

To define the unavailability of a single day, complete the following steps:

- a. Start the Calendar Working Hours (tcccp0120m000) session.
- b. Find the applicable calendar and availability type, and clear the **Available** check box for a working hours type on the relevant date.

- **Unavailable during a part of a day**

To indicate that part of a day is unavailable, use the Calendar Recurrences (tcccp0144m000) session or the Calendar Working Hours (tcccp0120m000) session to specify the time intervals that are *available*. All other times are considered unavailable. You cannot directly specify an unavailable time interval.

If you defined unavailable dates in the Calendar Non-Available Days (tcccp0119m000) session or the Calendar Recurrences (tcccp0144m000) session, in the Calendar Working Hours (tcccp0120m000) session, click **Update Calendar**.

#### Note

- Unavailability always applies to *entire days*. If the Calendar Working Hours (tcccp0120m000) session contains multiple time intervals for a single date, and the **Available** check box has been cleared for some intervals and selected for other intervals on the same day, the entire day is unavailable.
- A calendar recurrences that makes a day unavailable does has no effect on the availability of that day in the parent calendar.

It is not useful to define a special availability type for unavailability; this is because ERP LN does not maintain and update the working hours and the capacity data of a calendar in the Calendar Working Hours (tcccp0120m000) session based on availability types that are not available.

## To use calendars

To use calendars, you must link calendar codes to resources and availability types to the type of activity for which the resource is used.

To view the available combinations of calendar codes and availability types, start the Calendar Availability Types (tcccp0150m000) session. You can sort the records by calendar code or by availability type.

## Search path

If a package in ERP LN requires calendar data for some resource, ERP LN searches for an applicable calendar code for that specific resource. If no calendar is linked to that resource, ERP LN searches for calendars at higher levels, up to the company calendar.

For example, in Manufacturing, ERP LN checks whether a calendar code is linked to a work center. If no calendar code is linked to the work center, ERP LN checks the enterprise unit and if no calendar is found there, the company. If ERP LN does not find a calendar code, no planning takes place. The company calendar is always at the end of the search path.

### Note

The search path does not include the standard calendar. ERP LN only uses the standard calendar if a calendar code was found that does not cover all relevant dates.

## Calendar data in ERP LN

The following table shows how to link calendars to the most general resources:

To do this...	Use this session...
To define the <u>company</u> calendar	Companies (tcomm1170m000)
To define an <u>enterprise unit</u> 's calendar	Enterprise Units (tcomm0130m000)
To define a <u>department</u> 's calendar	Departments (tcmcs0565m000)
To define an <u>employee</u> 's calendar	Employees - General (tcom0101m000)

The following sections show how to use calendars in various parts of ERP LN.

### People

In the People module, you can link calendars to teams of employees. For more information, refer to Calendars in People.

### Order Management

The Order Management package uses calendars when calculating planned receipt dates and lead times. For more information, refer to Calendars in Order Management.

## Warehouse Management

In Warehouse Management, you can use calendars to indicate the opening hours of warehouses.

For information on how ERP LN calculates the planned delivery date and the planned receipt date of a warehousing order, refer to How ERP LN determines the calendar correction

For information on how ERP LN calculates the planned delivery date and the planned receipt date for replenishment of warehouses by using time-phased order point (TPOP) or statistical inventory control (SIC), refer to the following online Help topics:

- To generate orders (TPOP)
- To generate order advice (SIC)

## Freight Management

In Freight Management, you can use calendars to specify the opening hours of a ship-from address or ship-to address. For more information, refer to Calendar time-windows.

## Manufacturing

A work center's working times determine the available production capacity.

For more information, refer to Calendars in Manufacturing.

## Project

Project uses external scheduling packages for employee planning and equipment planning. The external scheduling package retrieves the calendar data from Calendars and Periods in ERP LN.

For more information, refer to *Calendar integration with external scheduling packages (p. 5-1)*.

## Service

In Service, you use calendars to specify when a cluster is available for servicing, and to define when a service department is available to perform service activities.

For more information, refer to To use calendars in Service.

## Enterprise Planning

In the planning processes, Enterprise Planning uses the calendars that you linked to work centers, warehouses, and so on.

To simulate a reduced or increased production capacity, you can assign availability types to scenarios. Therefore, you can create a different version of

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the working hours for each scenario. With these scenarios, you can analyze the consequences of adding an extra machine or taking a machine out of service for maintenance.

For more information, refer to Calendars in Enterprise Planning.

### **Financials**

In Financials, you can use payment calendars to determine the due dates for sales invoices and purchase invoices.

For more information, refer to the following topics:

- To use payment calendars
  - To set up payment calendars
-

This chapter describes how to integrate calendars with external packages.

### Calendar integration with external scheduling packages

The Calendars and Periods module contains the functionality to make calendars available to external scheduling packages.

#### Project

Project uses external scheduling packages for employee planning and equipment planning. The external scheduling package retrieves the calendar data from Calendars and Periods in ERP LN.

To list calendars that you want to make available to external packages, use the Calendar Selection for External Scheduling Packages (tcccp0181m000) session.

External scheduling packages do not support multiple availability types. For the external scheduling package, ERP LN creates a calendar ID that consists of the following parts:

- The parent calendars (multilevel).
- The calendar code.
- The applicable availability type.

In the CCP Parameters (tcccp0100m000) session, the **Calendar Length in ESP** field specifies the maximum length of the calendar ID for the external scheduling package.

In the CCP Parameters (tcccp0100m000) session, in the **Default Availability Type for ESP** field, enter the default value for the availability type for external scheduling packages.

To make more availability types available to external scheduling packages, use the Calendar Selection for External Scheduling Packages (tcccp0181m000) session.

## Calendars in Microsoft Project

In Microsoft Project, you can set up a connection form to indicate which ERP LN projects must be loaded into Microsoft Project. The availability types in the connection form determine which calendar must be loaded.

Besides the availability types in the connection form, you can indicate an extra combination of calendar and availability type in the Calendar Selection for External Scheduling Packages (tcccp0181m000) session that must be loaded into Microsoft Project. You can manually connect these calendars in Microsoft Project.

### To set up periods

Setting up periods for use by ERP LN applications involves the following steps:

- Defining period tables.
- Generating periods for use.
- Defining periods.

#### Defining period tables

Use the Period Tables (tcccp0160m000) session to create and maintain period tables.

Period tables are used to group periods with common attributes, including the following:

- Whether or not ERP LN checks that dates defined for a period belong to the defined calendar year.
- Whether or not modifications are allowed to periods of which the period table is currently in use.
- Whether or not periods can be deleted while their period table is currently in use.
- Whether or not gaps are allowed between years.

ERP LN applications use the period information you define by referring to the period tables.

#### Generating periods for use

Use the Generate Periods (tcccp0270m000) session to generate default periods based on the period tables you have created in the Period Tables (tcccp0160m000) session.

Periods generated are then available to the Periods (tcccp0170m000) session, in which you can define further details.

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## Defining periods

Use the Periods (tcccp0170m000) session to maintain periods. Each period is linked to a period table of which it shares the attributes. For each period, you define the following:

- The year that the period applies to.
- The start and end dates of the period.

## To use periods

This topic describes where and how periods are used.

### Periods for Commissions and Rebates

The Commissions and Rebates module in Order Management uses periods to calculate the commissions for sales representatives and agents, and rebates for customers.

### Periods for purchase schedules and sales schedules

The Purchase Control module in Order Management uses periods for purchase schedules. In the Items - Purchase Business Partner (tdipu0110m000) session, in the **Period Table** field you specify the applicable period table.

The Purchase Statistics and Sales Statistics modules in Order Management use periods for statistical analyses. In the Statistics Parameters (tdsta0100m000) session, in the **Period Table** field you can specify a period table.

### Periods in Repetitive Manufacturing

The Repetitive Manufacturing module in Manufacturing uses periods to organize repetitive production processes. In the Repetitive Manufacturing Parameters (tirpt0100s000) session, you can specify a production schedule's period table.

### Periods in Project

The Project Production Control module in Project uses periods to define cost-control periods.

### Periods in People

People uses periods for budgeting and hours accounting.

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**Note**

Financials does not use Calendars and Periods. To define the financial periods, Financials uses its own entities .



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# Appendix A

## Glossary

# A

### address

A full set of addressing details, which include the postal address, access numbers for telephone, fax, and telex, e-mail and Internet address, identification for taxation purposes, and routing information.

### assignment

A task for which hours lines are defined. For example, a weekly recurrent meeting.

### availability type

An indication of the type of activity for which a resource is available. With availability types, you can define multiple sets of working times for a single calendar.

For example, if a work center is available for production on Monday through Friday and available for service activities on Saturdays, you can define two availability types, one for production and one for service activities and link these availability types to the calendar for that work center.

### business partner

A party with whom you carry out business transactions, for example, a customer or a supplier. You can also define departments within your organization that act as customers or suppliers to your own department as business partners.

The business partner definition includes:

- The organization's name and main address.
- The language and currency used.
- Taxation and legal identification data.

You address the business partner in the person of the business partner's contact. The business-partner status determines if you can carry out transactions. The transactions type (sales orders, invoices, payments, shipments) is defined by the business partner's role.

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### buy-from business partner

The business partner from whom you order goods or services; this usually represents a supplier's sales department. The definition includes the default price and discount agreements, purchase-order defaults, terms of delivery, and the related ship-from and invoice-from business partner.

Synonym: buy-from supplier

### buy-from supplier

See: *buy-from business partner* (p. A-2)

### calendar

A register of days that contains information on the availability of, for example, resources or business partners at a specified time range.

### calendar code

An alphanumeric code to identify a calendar.

### calendar recurrence

A set of recurring dates for which working times and other calendar details have been defined.

You can use calendar recurrences to define calendars.

### capacity percentage

The percentage of the available production capacity that is the basis for work center utilization views and reports. For example, if a work center's working times are 06:00 - 16:00 (10 hours), the effectivity factor is 1.0 and the capacity percentage is 80%. 8 hours of production order execution corresponds with a capacity utilization of 100%.

The default capacity percentage is 100%.

### capacity utilization

The number of hours that a resource is used for production.

Alternatively, a percentage indicating the capacity use as a proportion of the total available capacity.

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**cluster**

A set of serialized items that have the same location and are owned by the same business partner. Grouping serialized items into a cluster enables you to maintain them collectively.

**commission**

The amount of money to be paid to an employee (sales representative) or buy-from business partner (agent) for closing a sales order.

**company**

A working environment in which you can carry out logistic or financial transactions. All the transaction data is stored in the company's database.

Depending on the type of data that the company controls, the company is:

- A logistic company.
- A financial company.
- A logistic and a financial company.

In a multisite structure, some of the database tables can be unique for the company and the company can share other database tables with other companies.

**cost-control periods**

In this period project-related costs and revenues are booked.

**department**

A company's organizational unit that carries out a specific set of tasks, for example, a sales office or a purchase office. Departments are assigned number groups for the orders they issue. The department's enterprise unit determines the financial company to which the financial transactions that the department generates are posted.

**due date**

In ERP LN, the date that a payment or receipt is required.

**efficiency factor**

A variable that ERP LN uses to take into account differences in the daily availability of a resource, such as when working overtime, hiring extra staff, or working in different shifts. For example, if an employee works six hours out of a possible eight hours on a project, the efficiency factor is 0.75.

Efficiency factors influence the lead-time calculation in Enterprise Planning.

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**employee**

A person who works at your company who has a specific function such as sales representative, production planner, buyer, or credit analyst.

**enterprise unit**

A financially independent part of your organization that consists of entities such as departments, work centers, warehouses, and projects. The enterprise unit's entities must all belong to the same logistic company, but a logistic company can contain multiple enterprise units. An enterprise unit is linked to a single financial company.

When you carry out logistic transactions between enterprise units, these are posted in the financial companies to which each enterprise unit is linked. You can define the relationships between the enterprise units, and thus the goods transfer that can take place between the enterprise units. To use invoicing and pricing between enterprise units, you must link the enterprise units to internal business partners.

You can use enterprise units to do separate financial accounting for parts of your business. For example, you can define enterprise units for separate parts of your organization that belong to one logistic company, but that are located in different countries. The accounting of each enterprise unit is performed in each country's national currency, and in the financial company linked to the enterprise unit.

**fixed delivery pattern**

A schedule of recurring fixed delivery moments.

Enterprise Planning uses calendar recurrences to create fixed delivery patterns.

**lead time**

The time between the production start date and the delivery date. The lead time can include order preparation time, transportation time, and inspection time.

**material release**

A schedule on which forecasted information is provided about shipping times, delivery times, and quantities.

In general, a material release can be considered as a planning release. For push schedules, however, the material release can also contain the actual order.

---

## overtime

Time worked beyond the regular working hours.

You can use overtime for the following purposes:

- For maintenance activities on objects not available for maintenance during regular working hours.
- To increase production capacity.

## parent calendar

A calendar linked to a child calendar, one level higher in the derivation hierarchy, and from which the child calendar inherits the properties.

## pattern

A scheme on which you can define the day of the week, day of the month, or day of the year, and the time of the day you want an activity, such as a release or a delivery, to be carried out.

## pattern code

The code used to identify the pattern for your activities. The pattern defines the date and time, such as the month or the day of the month, on which you want to carry out the activity.

## pattern moment

A particular time on a particular date, defined by using patterns, times of day, and exceptions.

## period

Periods divide a year into regular intervals, such as weeks, months, or quarters, that can be used for statistical, hours accounting, planning, and cost controlling purposes.

## period table

A table that consists of any number of time units, for example, months or weeks.

A period is used to define the time horizon during which, for example, a schedule is valid.

## planned delivery date

The date for which delivery of a shipment is planned.

---

## planned order

A supply order in Enterprise Planning that is created for planning purposes, but which is not an actual order yet.

Enterprise Planning works with planned orders of the following types:

- Planned production order
- Planned purchase order
- Planned distribution order

Planned orders are generated in the context of a particular scenario. The planned orders of the actual scenario can be transferred to the execution level, where they become actual supply orders.

## planned receipt date

The date on which the goods are expected to arrive in the destination warehouse.

## production schedule

A range of time to which production orders are assigned whose delivery dates fall in that period. The production orders can apply to an RPT item or a scheduling area.

The period length can be defined by the user.

## purchase invoice

Purchased goods that are received, inspected (if required), and posted to inventory are placed on a purchase invoice. You must pay the buy-from business partner for the quantity on the invoice.

The buy-from business partner, order, item data, prices, and discounts are printed on the invoice. You can compare the data on the invoice to the invoice you receive from the buy-from business partner.

## purchase schedule

A timetable of planned supply of materials. Purchase schedules support long-term purchasing with frequent deliveries and are usually backed by a purchase contract. All requirements for the same item, buy-from business partner, ship-from business partner, purchase office, and warehouse are stored in one schedule.

## rebate

The amount of money to be paid to a sold-to business partner as a kind of discount for closing a sales order.

---

**recurrence**

A repetition of dates, such as “Biweekly on Mondays and Fridays”, “The 27th of each month”, or “The first Monday in June of every 5th year”.

**sales invoice**

A bill that relates to the sale of goods or services. A sales invoice is a document, sent by the seller to the buyer, for each sale containing details on the goods sold.

**scenario**

The identification of an overall planning solution.

Each scenario represents one overall planning solution, and involves particular settings for the planning of items and resources. You can use scenarios to analyze and compare various planning options and to find the best planning solution. For example, you can vary demand forecasts or sourcing strategies.

One of the scenarios is the actual scenario, which corresponds with the actual planning situation. You can only transfer planned orders and production plans from the actual scenario to the execution level of ERP LN.

**schedule issue date**

The date and time, calculated by the issue pattern, which, for non-referenced schedules, is used to define the moment at which:

- Schedule lines are clustered.
- A purchase release is sent.

**service department**

A department that consists of one or more persons and/or machines with identical capabilities, that can be considered as one unit for the purposes of service and maintenance planning.

**service type**

The service classification that service providers offer. The service type determines which availability type applies to a service order header, and provides a default order procedure and coverage type.

---

**ship-from business partner**

The business partner that ships the ordered goods to your organization. This usually represents a supplier's distribution center or warehouse. The definition includes the default warehouse at which you want to receive the goods and if you want to inspect the goods, the carrier that takes care of the transport, and the related buy-from business partner.

Synonym: ship-from supplier

**ship-from supplier**

See: *ship-from business partner* (p. A-8)

**shipping schedule**

A schedule on which detailed information is given about shipping times or delivery times and quantities. A shipping schedule facilitates just-in-time (JIT) management.

**SIC**

See: *statistical inventory control* (p. A-8)

**standard calendar**

A calendar that is used as the default calendar. For the seven days the week, the standard calendar defines the working times for each availability type. Other calendars are derived from this calendar. If a planning run proceeds beyond the end date of a calendar or its parent calendar, ERP LN falls back on the standard calendar.

**statistical inventory control**

An order system in ERP LN that generates planned purchase or production orders to replenish stock.

The reorder point is usually calculated by adding the safety stock and the forecasted requirements during the replenishment lead time.

SIC items are planned by Warehouse Management.

Abbreviation: SIC

**team**

A way to group employees for planning and authorization purposes. If you assign roles to a team, all the employees assigned to the team have the authorizations that correspond to the roles.

---

### time-phased order point

A push system that regulates the time-phased supply of items to warehouses.

The quantity of items that is supplied to the warehouse depends on:

- The available inventory in the warehouse.
- The inventory that is planned to be delivered to the warehouse within the specified order horizon.
- The specified safety stock, optionally adjusted to the seasonal factor for the current period, for the item and warehouse.

If the available inventory plus the planned inventory are below the reorder point, the inventory in the warehouse is replenished.

Abbreviation: TPOP

See: safety stock

### TPOP

See: *time-phased order point* (p. A-9)

### vendor managed inventory (VMI)

Vendor managed inventory is an inventory management method according to which the supplier usually manages the inventory of his customer or subcontractor. Sometimes, the supplier manages the supply planning as well. Alternatively, the customer manages the inventory but the supplier is responsible for supply planning. Inventory management or inventory planning can also be subcontracted to a logistics service provider (LSP).

The supplier or the customer may own the inventory delivered by the supplier. Often, the ownership of the inventory changes from the supplier to the customer when the customer consumes the inventory, but other ownership transfer moments occur, which are laid down by contract.

Vendor-managed inventory reduces internal costs associated with planning and procuring materials and enables the vendor to better manage his inventory through higher visibility to the supply chain.

### warehouse

A place for storing goods. For each warehouse, you can enter address data and data relating to its type.

### warehouse order

See: *warehousing order* (p. A-10)

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## warehousing order

An order for handling goods in the warehouse.

A warehouse order can be of the following inventory-transaction types:

- **Receipt**
- **Issue**
- **Transfer**
- **WIP Transfer**

Each order has an origin and contains all the information required for warehouse handling. Depending on the item (lot or non-lot) and warehouse (with or without locations), lots and/or locations can be assigned. The order follows a predefined warehousing procedure.

### **Note**

In Manufacturing a warehousing order is often called a warehouse order.

Synonym: warehouse order

## work center

A specific production area consisting of one or more people and/or machines with identical capabilities, that can be considered as one unit for purposes of the capacity requirement planning and detailed scheduling.

## working hours type

A type of time interval such as Monday morning, Wednesday afternoon, or service weekend. For a working hours type, you can define defaults for start time and end time.

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