Time Zones

Release 4.6C

SAP ™

Copyright

Icons

Icon	Meaning
⚠	Caution
	Example
	Note
	Recommendation
	Syntax

Inhalt

Time Zones

Use

Processes which cover more than one time zone primarily affect logistic functions such as availability checks, production planning, delivery scheduling, statistics and service provision, but they also affect financial accounting in areas such as treasury, inter-company transactions, and so on.

This function enables you to use dates and times that are comparable and exchangeable in applications that are implemented worldwide. For time-related applications, the SAP system can use local dates and times for proposed dates and validations (for example, to ensure that a requested delivery date is not in the past).

Time Zone Management in Global Systems

🟩	Subcontractor
🏭	Plant
🟨	Distribution Center
🔴	Customer
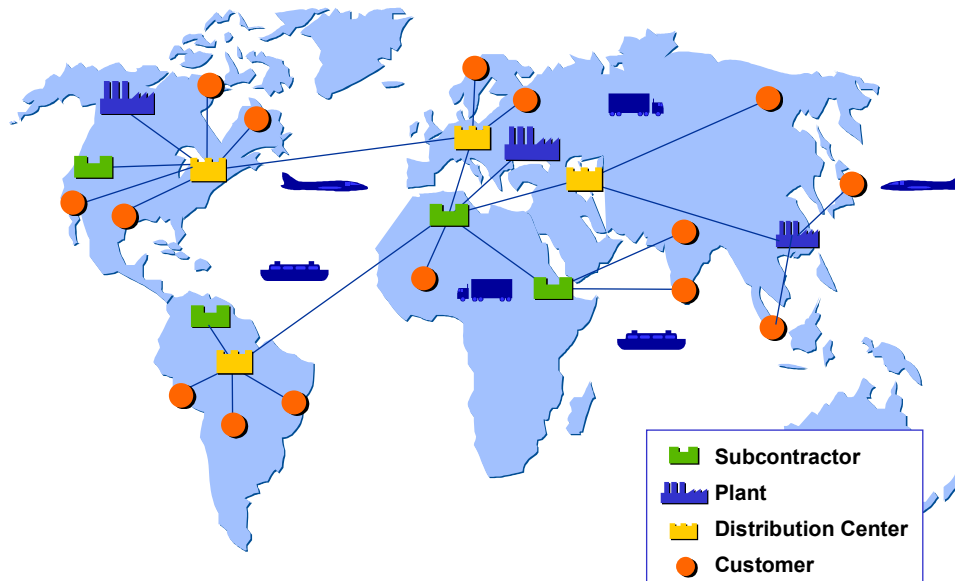
Global Application

Generally, users think and act in terms of their local time, and they also expect to use their local time in business transactions. When the SAP System is used for global transactions that span time zones, business partners and systems will have different local times. These differences in local times can lead to problems such as late postings and missed batch runs.

For example, a company with its headquarters and database server in New York requires that all billing documents be posted by 5:00 p.m. Users in the company's Los Angeles office might expect that to mean 5:00 p.m. in Los Angeles, which is 3 hours behind New York time. Thus any users in Los Angeles posting billing documents after 2:00 p.m. local time would be posting their documents too late.

Time Zones

Local times can be compared and exchanged as long as they share the same time zone. However, for business processes spanning time zones, inaccuracies of up to 24 hours could occur. By normalizing date and time internally, this function eliminates problems that can arise from users working in different local time zones. For some transactions, the system normalizes dates and times by storing a time zone [Seite 10] and a time stamp [Seite 8]. Currently, this only takes place in a few functions, for example, in the delivery schedule and in the print spooler.

Integration

The Time Zone function is fully integrated into the SAP system kernel. This integration allows for faster conversions between system and local dates and times.

> The terms "system date" and "system time" refer to the database server's date and time. Since application servers are synchronized with the database server, these terms also correspond to the application server's date and time.

Prerequisites

For this function to work properly you need to

- Maintain customizing data for time zones

- Define default time zone assignments for both the system and for users

> You can override the default time zone assignments in the user profile.

Features

Internal and External Representations of Time

To compare the local times of users in different time zones, the SAP system represents times differently externally and internally. The external representation of the time corresponds to a context-dependent local time. For example, in Germany, the time is represented in Central European Time (CET) and in New York in Eastern Standard Time (EST).

In some instances, the SAP system normalizes the internal system time to Universal Coordinated Time (UTC) which serves as a reference time. UTC corresponds to Greenwich Mean Time (GMT). By converting all local, relative times to absolute times based on UTC, the system can compare times and use them in calculations.

Times Stored with Dates

Considering dates alone is not sufficient to ensure exact time calculations. For time-critical processes, dates **with** times replace dates **without** times. A date standing alone, could easily result in a one day inaccuracy (for example, depending on the time of day, 3 February in Japan may still be 2 February in New York). For a date without a time, an inaccuracy related to time zones can be as long as **48 hours** in an extreme case.

For time calculations, an accurate duration (for example, hours and minutes instead of days) must be used. Otherwise, chain calculations such as the following could be inaccurate by several days:

<div style="border:1px solid black;padding:1em;width:50%">

Start date (accurate in days)

+ duration 1 (accurate in days)

+ duration 2 (accurate in days)

+ duration n (accurate in days)

= Stop date (accurate in days)

</div>

Times and Their References to Locations of Objects

All local times are relative to a particular location, and this location has a relationship to an object. This relationship is not explicit and R/3 can derive it only from system data such as in the *Customizing* tables (for example, Table T001W for plants), master data, such as the data for ship-to parties, and document data that overrides *Customizing* and master data (such as a one-time address).

Examples of typical objects and their relationships to locations include

- **Company code**

  A posting date is relative to the location of the company code.

- **Plant**

  A goods issue or goods receipt date is relative to the location of the plant.

- **Sales organization**

  A sales price is relative to the location of the sales organization

Time Stamp

Definition

The time and date of an event converted from local time to Universal Coordinated Time (UTC).

Use

The graphic below illustrates how a requested delivery date of 3 Dec 1999 13:00:00 CET for a ship-to address in Germany receives the time stamp of 3 Dec 1999 12:00:00 UTC.

From the SAP system's user Interface

Local date 3 Dec 99	**Local time** 13:00:00

Time zone of object CET (+1 h offset from UTC)

Conversion

Time stamp (UTC) 3 Dec 99 12:00:00

Time zone of object CET (+1 h offset from UTC)
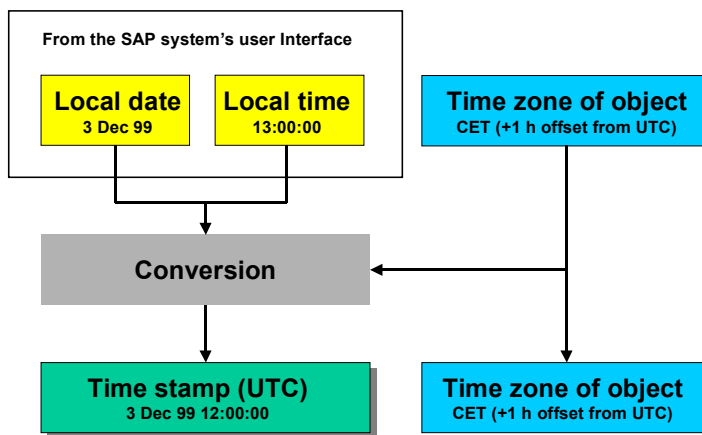
The SAP system uses a 24-hour clock with the local date and local time of the object (here the ship-to address) from the user interface with the object's time zone to calculate the time stamp. To display a time stamp in terms of the object's local date and time, SAP uses the object's time zone, which it stores with the time stamp, and goes through the process backwards.

For application programs, a time stamp accurate to the second is generally sufficient.

Structure

External Representation

The time stamp's external representation corresponds to the Date and Time representation. The same user options exist for displaying the time stamp as for the date and time:

- DD.MM.YYYY <separator> hh.mm.ss (12.06.1999 12:41:13)
- MM/DD/YYYY <separator> hh.mm.ss (06/12/1999 12:41:13)
- MM-DD-YYYY <separator> hh.mm.ss (12-06-1999 12:41:13)
- YYYY.MM-DD <separator> hh.mm.ss (1999.06-12 12:41:13)
- YYYY/MM/DD <separator> hh.mm.ss (1999/06/12 12:41:13)

The total output length is 19 characters. The system supports displaying times without seconds but it does not support displaying times as 'AM' or 'PM'.

Internal Representation

Internally, the system combines the data types Date and Time to create the 14-character time stamp (8 characters for the date and 6 for the time). Combining date and time allows the system to sort time stamps correctly based on date (year-month-day) or time (hour-minute-second).

Value Range

The allowed range of values for the time stamp is '01.01.0001 00:00:00' to '31.12.9999 23:59:59'.

> To avoid confusion with a.m. and p.m. time designations, the system always uses a 24-hour clock.

Initial Value

The system's initial value for the time stamp is zero or 00:00:00 which corresponds to midnight instead of 24:00:00.

Time Zone

Definition

Set of rules that dictates the offset of the user's local time from Universal Coordinated Time (UTC).

Use

The local time of a particular user depends on the user's location. The offset of a location from UTC is influenced by

- Geography (position on the globe)

- Political factors (time zones are assigned for a country, region, or even a postal code)

- Daylight saving time (DST), if applicable

Local Time

The local time in any time zone is calculated in relationship to Greenwich Mean Time (GMT), otherwise known as Universal Coordinated Time or UTC. (Greenwich is a city in the United Kingdom, which is used as the standard for all time zones.)

> For example, if the local time in Greenwich (UTC) is 6 p.m., it is 8 hours earlier or 10 a.m. in Los Angeles, which is located in the Pacific time zone. At the same time, it is already 3 a.m. the following morning in Japan, which is 9 hours later than UTC.

Additionally, some time zones observe daylight saving time (DST) and use a "summer time rule" for calculation purposes. For these time zones, clocks are normally set forward one hour to make better use of the longer daylight hours in the late spring, summer and early fall.

The determination as to which time zone a particular city or region belongs depends upon both geographical and political factors. The difference between the times of two defined positions on the globe can be up to 24 hours.

Structure

SAP includes rules to accommodate the factors listed above. These rules result in the following structure for a time zone in the system:
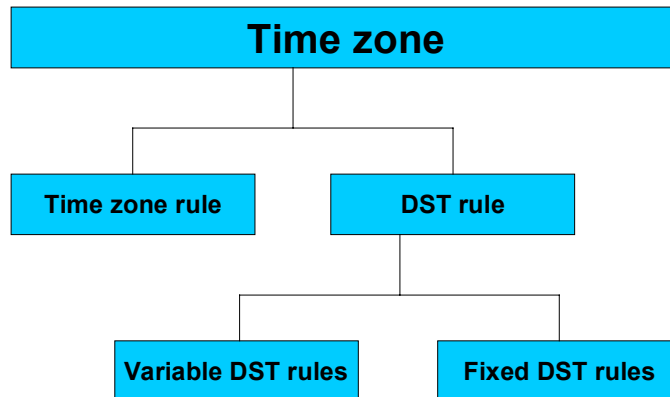
The following table describes each part of the structure in more detail.

Time Zone Rules

Part of structure	Description
Time zone	This part includes only the time zone indicator (for example, CET or EST) and a reference to the corresponding time zone rules and daylight saving rules.
Time zone rule	This rule defines the offset (+/- hours and minutes) relative to UTC due to geography and political factors.
DST rule	This rule defines the offset of daylight saving time relative to standard time (+1 hour). It does not define the start and end dates of daylight saving time (DST).
Fixed DST rules	For cases in which daylight saving time is not defined by variable rules, this rule defines the start and end dates of DST for a specific year.
Variable DST rules	This rule defines how the system calculates the start and end dates of daylight saving time. You can almost always change this rule and it saves you from having to maintain DST start and end dates every year.

Rather than distinguishing between two separate time zones (one for winter and one for summer), only one time zone indicator is used in the SAP System which includes the summer time rule when applicable.

External Representation

The time zone indicator is a string of up to six characters. Six characters are sufficient for the usual time zone indicators, which can depend on language and platform.

Time Zone

Internal Representation

The time zone indicator's internal and external representations are the same. In addition, the system does not convert between different indicators for the same time zone. For example, in English the acronym for Germany's time zone is CET and in German it is MEZ. For the time zone, the system uses only one indicator that you define. It does not use CET with English-speaking users and MEZ with German-speaking users.

Standardization of the Indicators

You create the time zone indicators in a Customizing table and, therefore, you can maintain them flexibly. This flexibility is necessary because there are no standards for time zone indicators. The indicators depend on the platform, the language and the software. And different terms are often used for DST and standard time in the same time zone (for example, EDT for Eastern Daylight Time and EST for Eastern Standard Time).

Initial Value

Initially, the time zone indicator is blank.

Time Zone Configuration

Purpose

This process explains how to set up and activate the Time Zone function in the SAP System.

Prerequisites

You use *Customizing* transactions to activate parameters in the system to

- Establish the time zone in which the system is located

- Define a default time zone for users (if no time zone is set in the user address)

- Enable the Flag time zones

To configure your system for the Time Zone function in *Customizing*, choose *Cross-Application Components* → *General Application Functions* → *Time Zones.*

Process Flow

1. Maintain basis customizing for time zones. You activate the Time Zone function settings by selecting the *Flag Time Zones enabled* field in the customizing table created for that purpose.

    Basis customizing includes defining time zones, their daylight savings rules, and their offsets from Universal Time Coordinated (UTC) and activating the Time Zone function. If you activate the Time Zone function, the system will display local dates and times in date proposals and validations.

    Much of the required basis customizing is already configured in your system, however, you can change it or add to it as required.

2. Check the assignment of time zones to geographical areas.

    Groups of users in a region or general geographical area should use the same time zone, even if it is not exactly the same time zone as their local time zone. For example, if all systems in Asia are using the same local time zone, the result is that the system will exhibit the same behavior; such as proposing the same posting date.

    The SAP system uses these assignments to determine the objects' time zones when converting between objects' local times and time stamps.

3. If a user and the system are in different time zones, specify the user's time zone in the user profile. (If the user and system are in the same time zone, you can skip this step.)

    Providing this time zone information in the profile allows users to see proposed dates and validations in terms of his or her local time.

4. After you log on again, check the system status to ensure that the Time Zone function is working properly.

Activating Time Zones

Prerequisites

When you log on to the SAP System for the first time, the system automatically selects the time zone that is nearest to where your system is located. Regardless, due to various factors, such as daylight saving time rules, you should check this setting to ensure it is correct in your system.

Procedure

To activate the Time Zone function

1. In *Customizing*, choose *Cross-Application Components → General Application Functions → Time Zones → Maintain time zone activation in client*.

2. Enter the system's time zone and the users' default time zone.

3. Since a system and the majority of its users are often in the same location, the system's time zone and the users' default time zone are usually the same.

   If the time zone you want to select is not available, please see Maintaining Time Zone Basis Data [Seite 15] and create it or send a request message to SAP referencing component CA-GTF-TIM.

4. To activate the Time Zone function, select the *Flag active* field.

Maintaining Time Zone Basis Data

Since the standard time zones are delivered with the SAP system, most users do not need to carry out this procedure. However, we suggest that you check these tables for the time zones in your local area to ensure that there are no errors due to local laws that may have changed in recent weeks.

Procedure

1. In Customizing, choose *Cross-Application Components* → *General Application Functions* → *Time Zones* → *Maintain time zones in basis customizing*.

2. Since the parts of a time zone's structure build on each other, define time zones by completing the table's parts as follows:

*   First define the variable daylight saving time rules or fixed daylight saving time dates (choose *Variable summer time rules* or *Fixed summer time rules*)

*   Then define the daylight saving time offsets (choose *Summer time rules*)

*   Next define the time zone offsets (choose *Time zone rules*)

*   Next define the time zone indicators (choose *Time zones*)

    Save this data after each table has been completed.

3. Return to the customizing tree and execute the steps described in Activating Time Zones [Seite 14].

Maintaining Geographical Assignments

Prerequisites

Before you make geographical assignments, Time zones must already be defined in your system. See Maintaining Time Zone Basis Data [Seite 15].

Procedure

1. In *Customizing*, choose *Cross-Application Components* → *General Application Functions* → *Time Zones* → *Display time zone customizing geogr. data.*

2. To assign countries, regions or zip codes, choose

   Time Zones in country

   Time zones in country/region or

   Generic time zones to postal code

3. Enter the country's or region's time zone in the *Def.tim.z* field (Default time zone).

   If a country or region includes more than one time zone, enter the preferred time zone in the *Def.tim.z.* field.

4. Save the geographical assignments.

Defining Time Zones in the User Profile

Procedure

1. From the SAP main menu, choose *Tools* → *Administration* → *User maintenance* → *Users.*

2. Enter the user's name and choose *Change.*

3. Select the *Defaults* tab and enter the user's time zone in the *Personal time zone* field.

    If no time zone is defined for a user, the system uses the time zone of the company to which the user is assigned. To view the company's time zone, select the *Address* tab. Then under *Company*, choose *More* (arrow). The company's time zone appears under *Street address*.

4. Save the user profile.

Checking the Time Zone Function

Procedure

From the SAP main header menu, choose *System* → *Status*.

If the Time Zone function and user profiles have been configured properly, the following appears in the *Usage data* section of the *System Status* dialog box.

Time Zone Status

For users that are …	This information appears
In the same time zone as the system	No time zone information
In a different time zone than the system	• User's time zone • User's local time • User's local date (Appears only if the local date is different from the system date.)

Determination of an Object's Time Zone

Purpose

This process explains how the system uses a series of decision rules to determine the time zone of an object in the R/3 system. By determining an object's time zone, the system can display a time stamp for the object in any local time. To ensure consistent determination of time zones and efficient performance, this process is performed by a central function.

Every object (for example, a plant) has an actual, or at least an assigned, location. The time zone of an object depends primarily on its location. However, a location's time zone can depend on political reasons rather than simply its longitude and latitude. Governments decide the time zone to which a location belongs for countries and/or their regions. In a few cases, they make the decision to assign a postal code in a city to a particular time zone. The decision rules take countries, regions, and postal codes into account.

Prerequisites

- Maintain the object's time zone attribute, if available.

- Maintain the object's country and region attributes, if available.

- Maintain the client's default time zone.

- Assign countries and regions to time zones.

Process Flow

The system can determine an object's time zone whether a central address is maintained for the object or not. In either case, the system determines the time zone as follows:

1. The SAP system checks the object's time zone attribute.

   If the object has a time zone attribute and it is maintained, the system uses this time zone.

2. SAP checks the object's country and region attributes.

   If the object has country and region attributes and they are maintained, it derives the object's time zone from this data.

3. SAP checks the object's country data (a required field).

   If the object's country includes only one time zone, the system uses this time zone for the object. If it includes multiple time zones, the system uses the country's default time zone.

4. If the SAP system could not determine the object's time zone through the first three steps, it uses the default time zone of the system's database server.

Batch Scheduling

Purpose

This process describes how you can schedule a job to be run in the background at a certain date and time.

Process Flow

There are two simple steps to this process:

1. Define the batch job.

2. Schedule the batch job.

Within an application, such as FI, you can start a batch job at a certain date and time which corresponds to the local date and time of the database server.

> For example, to carry out a background job in FI, from the SAP main menu, choose *Finance → Financial accounting → Accounts receivable → Periodic processing → Dunning.*
>
> For production planning in logistics, choose *Logistics → Production → MRP → Planning → Total planning → As background job* from the SAP main menu.

Controlling the Execution of the Batch Job

To run the background job overview, choose *Tools → CCMS → Jobs → Maintenance* from the SAP main menu.

> **Important!** The selection and display of start dates and times is relative to the database server. If you are in a location other than the location of the database server, adjust your selection accordingly. For example, if your local time is six hours ahead of the server time, you need to adjust the time for the batch job to be executed six hours earlier.

Time Zone Scenarios

Several scenarios are provided to assist you in determining how best you can apply the Time Zone function in your situation. These include the following:

- FI Scenario – Cost Center Effectiveness Date [Seite 22]

- FI Scenario – Document with Time Zone Enabled [Seite 23]

- FI Scenario – Time Localization for Intercompany Documents [Seite 24]

- FI Scenario – Scheduling Payment Program and Dunning Jobs [Seite 26]

- FI Scenario – Period End Procedures [Seite 27]

- MM Scenario – Global Purchasing [Seite 29]

- MM Scenario – Interplant Purchasing [Seite 30]

- MM Scenario – Period Close [Seite 32]

FI Scenario - Cost Center Effectiveness Date

Purpose

This scenario discusses cost center effectiveness dates while working in a system that has been enabled for time zones.

Prerequisites

System Time Zone = EST (NY)

User Time Zone = UTC+12

Date and Time of Document Posting:

- User date = 01-01-99

- System date/time = 12-31-98 / 12:57:25

Process Flow

1. You enter a document entered in Financial Accounting with a time zone setting of UTC+12.

2. You enter a cost center as a cost object on one line item of the document.

   The cost center's name is "Australia".

   The cost center's effectiveness date range is January 1, 1999 through December 31, 1999.

Result

When you go to the document entry screen, the posting date defaults to 01-01-99 based on the user's time zone setting. The system date is 12-31-98.

The entry is successfully posted to the "Australia" cost center. The "entry date" and "time of entry" in the accounting document header, which are always based on the system date/time, are earlier than the beginning of the effective date of the cost center. However, the posting date of 01-01-99 falls within the effectiveness date range of the cost center.

FI Scenario - Document with Time Zones Enabled

Purpose

This scenario describes the contents of date fields on the FI document when the Time Zone function is enabled in the system.

Scenario

System Time Zone = EST (NY)

User Time Zone = UTC+10 (Sydney, Australia)

User Company Code = 4100

Date and Time of Document Posting:

- User date/time = 13.11.98 / 09:47:06

- System date/time = 12.11.98 / 18:47:06

Result

When the Time Zone function is enabled in the system, default dates at the time of data entry are based on the user's time zone, not the system date. The *Entry date* and *Time of entry* fields in the accounting document header receive the system date and time.

FI Scenario - Localization for Intercompany Documents

Purpose

This scenario discusses dates and times on intercompany documents between two companies located in different time zones.

Process Flow

You post an intercompany document to two companies. The local date is different for the two companies.

Company code A: 3000 Location: New York, Date: 12.11.98, Time: 18:47:06

Company code B: 4100 Location: Sydney,   Date: 13.11.98, Time: 09:47:06

System Date: 12.11.98

You can post a single document for an intercompany transaction. This document is associated with a single day. The document date, posting date and entry date have the same value for both companies, although they may differ from each other.

Result

Posting Date

The determination of the posting date depends on the type of transaction. The posting date is determined by one of the following methods:

- Manually, by the user posting the document

- If you have enabled the Time Zone function, the system will propose the local date of the user who enters the document. (This is the same as the date which is normally proposed/defaulted for postings in the system.)

- In the case of an intercompany material shipment (delivery in SD), the system date at the time of the goods issue posting from the supplying plant is used as the posting date. This system records this transaction for both companies with the date of the system at the time of the goods issue. Once the goods have been received in the receiving plant, a goods receipt document moves the inventory from the in-transit storage location. If the Time Zone function is enabled in your system, this document will have a posting date based on the local date of the user making the entry.

Entry/Creation/Change Dates

These dates are always set to the system date at the time of the transaction. Even when you are working in a system enabled for time zones, these dates are not based on the local date of the user. They must be set to the system date for the sake of uniqueness.

Tips

The implications of transacting in a global environment should be considered in the context of month end calculations. Intercompany and/or interplant transactions may impact different

periods. Your procedures for conducting business on the first/last day of the fiscal period should take this into account if you are doing business across time zones.

See also:

FI Scenario - Period End Procedures [Seite 27]

MM Scenario - Interplant Purchasing [Seite 30]

FI Scenario - Scheduling Payments and Dunning

Purpose

Although you have the Time Zone function enabled, the scheduling of background processing of the *payment* program and the *dunning run* use the system date and time.

Process Flow

System date = 12-31-98 (EST)

User Local date = 01-01-99 (UTC + 10)

The user creates the following payment run:

- Run date = 01-01-99 (explicitly entered by the user)

- Identification = AUST1

Result

Within the parameters of the payment run, the *Posting date* and *Doc entered up to* date default to 01-01-99 based on the run date of the payment program.

> When you run the *proposal* or *payment* in the background, the scheduled time will be the **system** date and time, not the user's local date and time.

The date and time which are entered when scheduling the *proposal* and the *payment* to be run in the background are the **system** date and time, not the user's date and time. The default date, which appears when scheduling the proposal for the payment run, is 12-31-98. During the window of time that the system date and the user date are the same, it is **not** obvious that the scheduling of the *proposal* and the *payment* is executed in system time, not the user's local time.

The same result occurs when you schedule a *dunning run* for processing as a background job.

FI Scenario - Period End Procedures

Purpose

This topic discusses the implications of the fiscal period end for a corporation or companies with plants located in multiple time zones.

Prerequisites

You may have one or both of the following situations:

1. Companies located in multiple time zones.

2. Separate entities within a corporation (for example, with plants which are located in separate time zones).

Either situation requires that you consider certain factors surrounding period end procedures in order to minimize the impact of the period change on all locations.

Process Flow

Consider the following when defining your period end procedures:

1. **System Date** – What is the system date? Which users have a local time equal to the system date? Which users have a local time zone that is different from the system date?

2. **Time Zone Function** – Without enabling Time Zone functionality, the date that is defaulted when processing transactions is the *system date*. This default date may be in the incorrect posting period for a large number of users depending on the structure of your business. The default date with Time Zones enabled is the local date of the user entering the transaction (as defined by the user master record). Your period end procedures may differ depending on whether or not you have enabled Time Zones. If you do not have Time Zones enabled, you may wish to do so as a result of the period end analysis.

3. **Plant Location** – If you have plants within a company code that are located in various time **zones**, your procedures for month end will have to take into account the different operating times of these plants in order to minimize potential down time of some locations around period end.

4. **MM Close Period** – If you have **plants** *within* a company code located in distant time zones, the determination of when to close the MM period becomes more complex. For information on minimizing material blocking during the execution of the MM period close, see MM Scenario - Period Close [Seite 32].

5. **FI Close Period** – The FI posting periods are determined by the Fiscal Year Variant **associated** with the company code. You can open/close posting periods based on a company code's local time if you have a unique Fiscal Year Variant defined for each company code. Authorizations can be used to prevent unwanted postings into open periods other than the current period.

6. **Intercompany/Interplant Transactions** – All intercompany transaction in R/3 update the participating company codes with the same posting date. The determination of the posting date is dependent on many factors including the type of transaction and whether or not you are utilizing Time Zone functionality. When working with company codes in distant time zones, intercompany postings may be something you wish to monitor. To report cross-company code documents posted during a specified range of dates, follow this menu path.

FI Scenario - Period End Procedures

       i.   From the General Ledger menu, choose *Document* → *Cross-CC transaction* → *Display*.

      ii.   Click on the *List* button transaction.

     iii.   Enter the appropriate range of posting dates and/or other criteria.

     iv.   Choose `EXECUTE`

7. **Transaction Cutoff** – For work in an environment where each plant/location has its own system, processing can be cutoff for a period based on the local time of the location. When multiple locations in varying time zones are working using one system time, one cutoff time based on the system time may need to be enacted in order to minimize the risk of financial misstatement. The use of the Time Zone function allows users to work in their respective local times as opposed to working using the system time. The Time Zone function may negate the need for a centralized cutoff time at period end.

Result

When you work with multiple entities across distant time zones, the determination of when to open/close posting should be carefully analyzed. Many factors should be considered, including those stated above.

MM Scenario - Global Purchasing

Purpose

This scenario provides information that will assist global companies dealing with purchasing functions which are impacted by time zone differences from one location to another. The Time Zone function is used to convert dates locally and a description of the resulting dates and recommendations for alternate procedures are explained in this topic.

Process Flow

1. A shared service center for a global purchasing organization enters a purchase order. Depending on the location of the vendor and plant to receive the goods, the delivery date may actually be in the past (for example if the purchasing function takes place in Asia and the vendor and plant is in California). The system suggests a delivery date and displays a warning. However, you can bypass the warning and save the purchase order.

2. When the goods are received in the other country, a document and posting date are entered as defaults based on the time zone of the user entering the transaction. There is no error due to this conversion and the stock is posted and appears available at that time.

3. The material document has several dates attached to it based on the movement that occurred:

   - Posting date

   - Document date

   - Entry date.

   The posting date and the document date are entered as defaults based on the user master. The entry date is the system date at the time of the transaction.

Result

The document date and the posting date default to the time zone of the user. The system time is kept internally and displayed as the entry date.

Tips

Since the entry date differs from the document and posting dates for time zone enabled sites, use caution when you view dates in material documents for auditing and reporting purposes.

If period closings are done in a later time zone (such as the US) other areas could have problems posting material movements in their local time. A procedure for doing period closings ahead of time in the later time zone should be instituted to ensure the earlier time zone is not blocked from doing goods movement transactions.

Also, since a vendor is not typically on the same SAP system a time zone effect cannot be converted to the vendor. It is the responsibility of the vendor to determine the correct delivery time for the shipment.

See also:

MM Scenario - Interplant Purchasing [Seite 30]

MM Scenario - Interplant Purchasing

Purpose

This scenario explains the issues involved for performing interplant purchasing between plants that are in distant time zones. Using the Time Zone function, the system can display local dates and times, but the system times remain unchanged. We have a choice of using the standard purchasing stock transport or the delivery enabled stock transport. Using deliveries enables shipping functions such as ATP checking upon delivery create, use of routing times, print documentation for the movement and delivery scheduling.

For longer distances we recommend that SD deliveries be used even though it involves more configuration and processing. Stock transport orders do not have the necessary in-transit planning needed for longer distances, and time zone differences can worsen the situation.

Process Flow

1. A stock transport purchase order is created to bring goods from a distant plant location (whether they are in the same company or not). The delivery date can be in the past since it is the delivery date of the receiving plant, and not of the user entering the transaction. The order date is based on the time zone of the user entering the transaction.

2. A delivery due list can be called to display what should be delivered from the supplying plant. The delivery due list is called up based on the delivery creation date proposed. The delivery creation date is determined from the receipt date of the customer minus the planned delivery time in the material master.

    The delivery time from goods issue in the supplying plant to goods receipt in the requesting plant cannot be defined unless you use route determination with transit time.

3. Even though there is a goods issue date on the delivery, the goods issue for the delivery is posted with the system date when the items move out of the supplying plant in-transit to the receiving plant. This is because the date is assigned in the background and cannot be seen by the user.

4. When the goods arrive at the receiving location, the posting date is the same as the date of the user making the transaction. The entry date is the same as the system date when the transaction occurred.

Result

The **stock transport** has an order date based on the local user time but a delivery date based on the requested date of the plant receiving the goods.

On the **delivery due list**, the delivery creation date is based on the due date at the receiving plant minus the planned delivery time.

On the **delivery**, the goods issue date is a week prior to the actual delivery date. The GERUSA route has in-transit, load time, and a calendar that it uses in calculating this date.

On the **accounting document** for the material movement of the goods from the supplying plant to the receiving plant, the posting date is the **system date** since it does not show up when creating the delivery.

The important thing in **material documents** is that the value of the goods is transferred **immediately** upon the issue from the supplying plant to the receiving plant.

Tips

Delivery documents post goods issue with the system date as the posting date. This cannot be changed manually.

You can use standard MM stock transfers or SD deliveries for these types of transactions, but there is currently a gap in that the transportation time from when the supplying plant issues the goods and when the receiving plant makes it available. Currently the stock is available in an in-transit status **immediately**.

Therefore, we recommend that for long transit times the delivery processing option is used with route determination for managing long in-transit times.

As soon as the delivery is posted in the shipping plant, the goods are valued in the receiving plant in an "in-transit" status. The value of these goods will then show up in the inventory account of the receiving plant.

See also:

MM Scenario - Global Purchasing [Seite 29]

MM Scenario - Period Close

Scenarios

Case 1

A global company may have materials that are maintained in many locations within the same system. Each month the previous posting period is closed and a new posting period is opened. The period close program requires that no changes be made to material records – including goods movements. Since a period close program in the evening in one location may conflict with goods movements during the day in another, a workable procedure for this transaction must be developed.

Case 2

There can also be problems when the local posting date is not in an open period or it is posted in the previous period when it should probably be posted in the current period.

Either case may occur when time zone differences exist between the central period close location and distributed plant locations.

Process Flow

Case 1

1. Determine whether a period close in one location may conflict with normal business processes in another (for example, a US company with a distribution center in Australia or Europe). Period close is run by company code but the standard system locks all materials when doing the period close. SAPNet - R/3 Frontend notes exist for improving this situation if necessary (see *Tips* below).

2. Attempt to find a time that will be acceptable to both the central plant doing the period close and the plants that are located remotely. The runtime could be several hours depending on the number of material masters, so it is very important that a convenient time can be determined.

3. Through release 4.5, the period close must be run which blocks material movements for the duration of the run. The only way to minimize the locking is to use a note so that the locking is done by one company code at a time (see *Tips*).

Case 2

1. Use the Time Zone function so that material/financial postings are always made in the local date/time.

2. Set the system time to the local time with the greatest number of users. This ensures that the transaction date/time for most users will be correct and that conflicts in time differences will be minimized.

3. Run the period close program based on the earliest local time. Make sure that SAP is configured to allow postings into at least one prior period.

Tips

- See OSS messages for help about *period close* (search on transaction MMPV). Notes 72976, 24948, and 25024 provide guidance on how to make the period close program run more quickly and independently.

- You can use a system message to alert users that a period close is about to be executed. In the event that all materials cannot be locked, the last resort is to delete the locked entries. (Since this can create material posting errors, it is not recommend.)

- Additionally, you can use authorizations to limit who may be able to run the period close program.

See also

FI Scenario - Period End Procedures [Seite 27]