# Understanding Absence Quotas

## Applies to:

4.6 c and later versions.

For more information, visit the Business Process Modeling homepage.

## Summary

Absence quotas are used to manage an employee's time off.  Various quota types (such as vacation or sick time) are set up to allow the employee a particular number of hours or days off.

Absence quota information is stored in Infotype 2006 Absence Quotas, and can be paid out using Infotype 0416 Time Quota Compensation. These Infotypes have been available since release 4.0B and replace leave functionality in Infotypes 0005 Leave Entitlement and 0083 Leave Compensation. Although, the leave functionality (0005/0083) can still be used, it is recommended to use the new, more robust quota functionality.

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## Quota Terminology Explained

**Accrual –** an amount of time credited to an employee's "account" of allowed time for a certain absence. An accrual can be characterized by 1) how the amount to be credited is determined, and 2) the time frequency of the credit. The amount to be credited can be a constant amount or variable based on seniority, age, or other criteria in the company policy. The frequency of credit may vary from annually to daily. An example of a simple accrual would be for personal holiday time where every employee receives 16 hours, credited once a year on January 1. An example of a more complex accrual would be vacation time based on seniority, calculated daily and credited at the end of each pay period. Some accruals are held in a table maintained during time evaluation. Accrued time may or may not be available for use by employees. See **transfer time**.

**Manual accrual –** a quota where the allotment amount and timing of creating the infotype record are done by user-initiated transaction (i.e. PA61) rather than via a program. Very little configuration is required for manual accruals beyond creating the quota type. The manual accrual is used for accruals which can be created quickly and may not be applied to all employees all of the time. An example of this would be jury duty. An employee would not be eligible to take jury duty until they have been accepted on a jury. At that time a quota could be created so they can then record jury duty absence. This would mean that the employer would not carry a liability for accrued absence time unless the absence was in the near future.

**Automatic accrual -** a quota where the allotment amount and timing of populating the infotype record are done via a program. Configuration of quota selection rules is required for automatic accruals. Automatic quota accruals are very useful for implementing quotas that are held by many segments of the employee population and are based on tier rules such are yearly granted or seniority based accrual. Two examples of these are sick or vacation time. The automatic accrual could be created by either running RPTQTA00 without the use of time evaluation or during time evaluation (RPTIME00.)

The majority of this document is devoted to quotas that are automatically accrued.

**Entitlement –** an amount of time available to an employee, to be used to limit time off for one or more specific absences. This may or may not be the same as accrued time, depending on the transfer time of the quota. Absence types tied to quotas check the amount of remaining entitlement to determine if the absence is allowable. Absence records or quota compensation records reduce the remaining entitlement, but not the total amount of the entitlement. The entitlement field can be changed manually, by quota selection rules, or via personnel calculation rules depending on the accrual method of the quota.

**Transfer time –** the point at which an accrual amount is used to populate the entitlement field of a quota. The transfer can increase or replace an existing entitlement. For manual accruals, the transfer is immediate, taking place when the user creates or changes the infotype record. For automatic accruals, the transfer time is configured as part of the quota selection rule and occurs during program execution.

# Quota Groupings and How They Interact

## Employee Subgroup Grouping (ESG) for Time Quotas

***Menu Path:  Personnel Time Management>Time Data Recording and Administration>Managing Time Accounts Using Attendance/Absence Quotas>Setting Groupings for Time Quotas>Group Employee Subgroups for Time Quotas***

Employee subgroups for which the same attendance and absence quota types are defined are assigned to the same grouping for time quota types. In your personnel structure, if you have employee subgroups that are entitled to use the same quota types, you can use just one grouping (such as 1) for all of the employee subgroups. If, however, distinctions need to be made as far as different quota types being available for different employee subgroups, you will need to use different subgroup groupings for your employee subgroups.

| EE group | Name of employee grp | Employee ... | Name of EE subgroup | ESG Time qu... | |
|----------|---------------------|--------------|---------------------|----------------|---|
| 1 | Company Employee | U0 | Hourly | 1 | |
| 1 | Company Employee | U1 | Hourly PT | 1 | |
| 1 | Company Employee | U2 | Salary | 1 | |
| 1 | Company Employee | U3 | Salary PT | 1 | |
| 1 | Company Employee | U4 | Executives | 1 | |
| 1 | Company Employee | U5 | Union | 1 | |
| 1 | Company Employee | U9 | Sales Rep (SD) | 1 | |
| 1 | Company Employee | UT | Tips | | |
| 2 | Retiree | U2 | Salary | | |
| 2 | Retiree | U5 | Union | | |
| 2 | Retiree | U6 | Non-Payroll w/ben | | |
| 2 | Retiree | U7 | Non-Payroll w/o ben | | |
| 4 | Intern | U0 | Hourly | 1 | |
| 4 | Intern | U1 | Hourly PT | | |

## Personnel Subarea Groupings (PSG) for Time Quotas

***Menu Path:  Personnel Time Management>Time Data Recording and Administration>Managing Time Accounts Using Attendance/Absence Quotas>Setting Groupings for Time Quotas>Group Employee Subgroups for Time Quotas***

Personnel subareas for which the same attendance and absence quota types are defined are assigned to the same grouping for time quota types. In your Enterprise structure, if you have personnel subareas that are entitled to use the same quota types, you can use just one grouping (such as 10) for all of the personnel subareas. If, however, distinctions need to be made as far as different quota types being available for different personnel subareas, you will need to use different subarea groupings for your personnel subareas.

| Personnel area | Personnel area text | Personnel subar... | Pers. subarea ... | P.. | |
|----------------|--------------------|--------------------|--------------------|-----|---|
| 1010 | Headquarters | 0001 | Administration | 10 | |
| 1010 | Headquarters | 0002 | Human Resour... | 10 | |
| 1010 | Headquarters | 0003 | Finance | 10 | |
| 1010 | Headquarters | 0004 | Sales/Marketing | 10 | |
| 1010 | Headquarters | 0005 | Manufacturing | 10 | |
| 1010 | Headquarters | 0006 | Operations | 10 | |
| 1010 | Headquarters | 0007 | R&D | 10 | |
| 1010 | Headquarters | 0008 | Field Support | 10 | |
| 1010 | Headquarters | 0009 | IT | 10 | |
| 1010 | Headquarters | 0010 | Union A | 10 | |
| 1010 | Headquarters | 01 | Administration | 10 | |
| 1011 | Product A | 0001 | Sales/Marketing | 10 | |
| 1011 | Product A | 0002 | Manufacturing | 10 | |
| 1011 | Product A | 0003 | Operations | 10 | |

It is important to note that each grouping within Time Management (such as PSG for work schedules, PSG for substitutions, PSG for attendance/absence types, etc) is independent of one another.

## Personnel Subarea Grouping (PSG) for Time Recording

*Menu Path:  Personnel Time Management>Time Evaluation>Time Evaluation Settings>Set Personnel Subarea Groupings for Time Recording*

In most cases, using 01 for all personnel subareas is sufficient. If, however, your company wants to differentiate in terms of time transfers, access control, time types and time type determination, or error processing, you can add additional groupings.

**Note:** The standard time types are all created under PSG 01. Therefore, if you choose to use another PSG (other than the standard-delivered 01), you must copy all the delivered time types to your grouping for time evaluation to work.

| Personnel area | Personnel subar... | Pers. subarea ... | PS g... |
|---|---|---|---|
| 1010 | 0001 | Administration | 01 |
| 1010 | 0002 | Human Resour... | 01 |
| 1010 | 0003 | Finance | 01 |
| 1010 | 0004 | Sales/Marketing | 01 |
| 1010 | 0005 | Manufacturing | 01 |
| 1010 | 0006 | Operations | 01 |
| 1010 | 0007 | R&D | 01 |
| 1010 | 0008 | Field Support | 01 |
| 1010 | 0009 | IT | 01 |
| 1010 | 0010 | Union A | 01 |
| 1010 | 01 | Administration | 01 |
| 1011 | 0001 | Sales/Marketing | 01 |
| 1011 | 0002 | Manufacturing | 01 |
| 1011 | 0003 | Operations | 01 |
| 1011 | 0004 | R&D | 01 |
| 1011 | 0005 | Union A | 01 |
| 1012 | 0001 | Plant A | 01 |

## Specify Rule Groups for Quota Type Selection

In this step, you determine which groupings are used to access the table for absence quota type selection. Absence quota type selection is based on the employee's organizational assignment and is determined by the quota type selection rule group. You may need to use different rule groups if, for example, different groups of employees share the same quotas but have different accrual rules.

The three methods of determining rule groups are discussed below.

> **Feature QUOMO**
> *Menu Path:  Personnel Time Management>Time Data Recording and Administration>Managing Time Accounts Using Attendance/Absence Quotas>Calculating Absence Entitlements>Rules for Generating Absence Quotas>Specify Rule Groups for Quota Types.*
> This Feature allows you to determine the quota type selection rule group based on employees' organizational assignments.  The standard value fields for decisions are as follows:

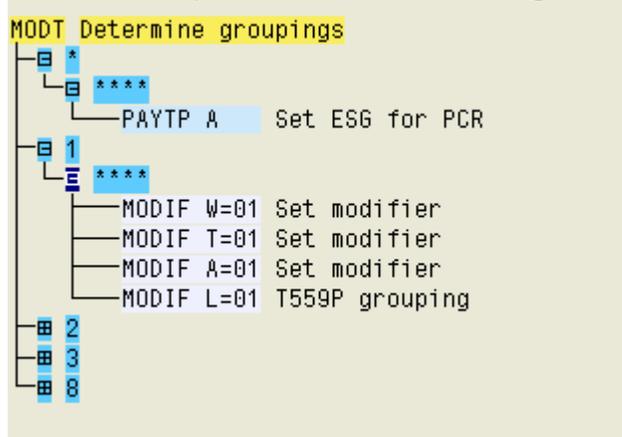| | |
|---|---|
| BUKRS | Company Code |
| WERKS | Personnel Area |
| BTRTL | Personnel Subarea |
| PERSG | Employee Group |
| PERSK | Employee Subgroup |
| MOLGA | Country Grouping |
| MOURA | Personnel Subarea Grouping for Leave Types |
| TRFAR | Pay Scale Type |
| TRFGB | Pay Scale Area |
| TRFGR | Pay Scale Group |
| TRFST | Pay Scale Level |
| SCHKZ | Work Schedule Rule |
| PERNR | Personnel Number |
| ANSVH | Work Contract |
| CTTYP | Contract Type |

This is an example of how the Feature QUOMO might look :
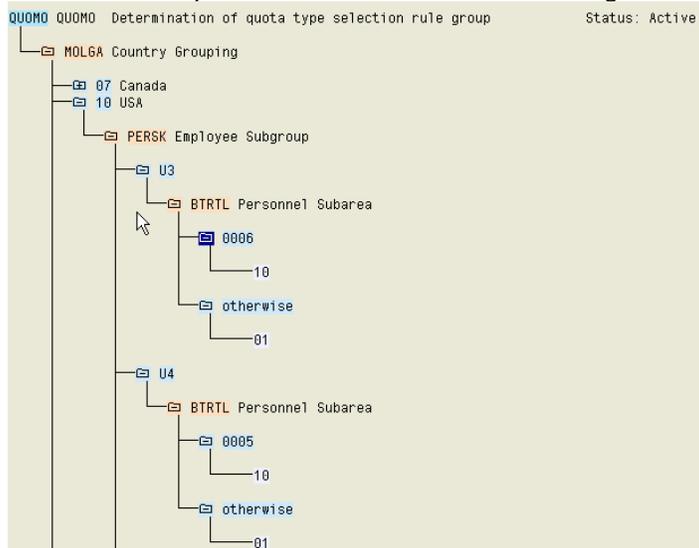
> ➤ **Function MOD**

This function is used in the time evaluation schema. Function MOD accesses the personnel calculation rule MODT. Within this rule, operation MODIF Q=xx is used to determine the quota type selection rule group. The employee subgroup grouping for the personnel calculation rule is queried in this rule using operation PAYTP. Employee master data from Infotypes 0001, 0007, and 0008 can be used in this rule to determine the quota selection rule group.

This is an example of how the rule MODT might look :

```
MODT Determine groupings
  ┌─⊟ *
  └─┬─⊟ ****
        └──PAYTP A     Set ESG for PCR
  ┌─⊟ 1
  └─┬─Ξ ****
        ├──MODIF W=01 Set modifier
        ├──MODIF T=01 Set modifier
        ├──MODIF A=01 Set modifier
        └──MODIF L=01 T559P grouping
  ┌─⊞ 2
  ├─⊞ 3
  └─⊞ 8
```

> ➤ **Custom Personnel Calculation Rule**

You can access a PCR by using function ACTIO in day processing in the time evaluation schema. Information on the day being evaluated, such as DWS class, day type, and time data, as well as employee master data from Infotypes 0001, 0007, and 0008 are used in this rule. Operation MODIF Q=xx is used to set the quota type selection rule group.

## Creating an Absence Quota Type

*Menu Path:  Personnel Time Management>Time Data Recording and Administration>Managing Time Accounts Using Attendance/Absence Quotas> Time Quota Types> Define Absence Quota Types.*

| | ESGpg | PSG | Absence quota type | Quota text | Start date | End date |
|---|---|---|---|---|---|---|
| ▶ | 1 | 10 | 20 | MR - ABC Vacation | 01/01/1990 | 12/31/9999 |
| | 1 | 10 | 21 | ABC vacation Carryover | 01/01/1990 | 12/31/9999 |
| | 1 | 10 | 97 | B Test | 01/01/1990 | 12/31/9999 |
| | 1 | 10 | 99 | Leave entitlement | 01/01/1990 | 12/31/9999 |
| | 1 | 11 | 01 | Paid time-off in lieu | 01/01/1900 | 12/31/9999 |

The ESG here is ESG for Time Quotas and the PSG is the PSG for Time Quotas discussed in the last section.  Select an entry to copy or click "New Entries."



On the details screen, select the time unit (hours or days) which will be used for tracking.  The unit must be the same as absence types that will deduct from the quota.  If employees will be allowed to "borrow" from entitlement not yet earned, indicate the limit for this negative deduction.

## Setting the Accrual Method for Quota Types

*Menu Path:  Personnel Time Management>Time Data Recording and Administration>Managing Time Accounts Using Attendance/Absence Quotas>Calculating Absence Entitlements>Automatic Accrual of Absence Quotas> Permit Generation of Quotas in Time Evaluation  OR  Permit  Generation of Quotas Without Time Evaluation.*
*Alternative Menu Path: Personnel Time Management>Time Data Recording and Administration>Managing Time Accounts Using Attendance/Absence Quotas>Calculating Absence Entitlements> Setting up Methods for Quota Accrual> Activate Automatic Accrual for Time Evaluation*
*All menu paths will result in the same table view.*

| | ES gr | PSG | AQTy. | Quota text | Start date | End date | Unit | No generat. | Increase | Replace | NegDed | TCC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 10 | 19 | FMLA | 01/01/1900 | 12/31/9999 | Hours | ● | ○ | ○ | | 01 |
| | 1 | 10 | 20 | MR - ABC Vacation | 01/01/1990 | 12/31/9999 | Hours | ○ | ● | ○ | 40.00000- | 01 |
| | 1 | 10 | 21 | ABC vacation Carr... | 01/01/1990 | 12/31/9999 | Hours | ○ | ○ | ● | | 01 |
| | 1 | 10 | 97 | B Test | 01/01/1990 | 12/31/9999 | Hours | ○ | ○ | ● | | 01 |
| | 1 | 10 | 99 | Leave entitlement | 01/01/1990 | 12/31/9999 | Hours | ● | ○ | ○ | | 01 |

For quota types that will be manually accrued and created, check "No generation."  For quota types that will be automatically accrued (by time evaluation or the generation program), check "Increase" or "Replace."  If "increase" is selected, each accrual amount transferred will add to the existing entitlement.  "Replace" will overwrite the existing entitlement when accruals are transferred.

## Counting Rules

*Menu Path:  Personnel Time Management>Time Data Recording and Administration> Absences> Absence Catalog> Absence Counting> Rules for Absence Counting (New)> Define Counting Rules*

 Counting rules are used to help control when an attendance and/or absence can be recorded.
There are several areas that can be controlled by the counting rules.  Weekdays, holiday classes, day type, counting class for period work schedule, daily work schedule class, planned hours condition and quotas (if applicable) are all elements of the counting rules.

Each weekday can be indicated whether or not it is valid for an attendances or absence.  If a day is not selected then the absence cannot be recorded on that day.

Applicability of rule

Conditions for current day

Weekday

☑ Monday       ☑ Wednesday       ☑ Friday       ☑ Sunday
☑ Tuesday      ☑ Thursday        ☑ Saturday

The values of 1 – 9 can be used as valid holiday classes.  A different holiday class may be defined for each individual holiday.  A different holiday class could be used to indicate that those holidays might need to be handled differently. If absences are not permitted on certain holidays then the holidays would need to have a unique holiday class associated with them and that holiday class should not be checked in the counting rule.

**Holiday class**
- ☑ Not a public holiday
- ☑ Holiday class 1 - public hol.
- ☑ Holiday class 2 - public hol.
- ☑ Holiday class 3 - public hol.
- ☑ Holiday class 4 - public hol.
- ☑ Holiday class 5 - public hol.
- ☑ Holiday class 6 - public hol.
- ☑ Holiday class 7 - public hol.
- ☑ Holiday class 8 - public hol.
- ☑ Holiday class 9 - public hol.

The values of 1 – 9 can be used as valid day types.  Like holiday class different day types can be associated with different daily work schedules.  A different day type could be used to indicate that those work schedule days will be handled differently.  If absences are to be not permitted on certain day types then the work schedule would need to have a unique day type associated with them; then that day type should not be checked in the counting rule.

**Day type**
- ☑ Work acc. to work schedule
- ☑ Day type 1: Day off
- ☑ Day type 2: Day off
- ☑ Day type 3: Day off
- ☑ Day type 4: Day off
- ☑ Day type 5: Day off
- ☑ Day type 6: Day off
- ☑ Day type 7: Day off
- ☑ Day type 8: Day off
- ☑ Day type 9: Day off

Counting class for period work schedule follows the above philosophy as well.  A different period work schedule class could indicate a different shift and unique shift premiums might be applied to that shift.

**Conditions for work schedule**

**Counting class for period work schedule**
- ☑ Counting class 0
- ☑ Counting class 1
- ☑ Counting class 2
- ☑ Counting class 3

Daily work schedule class for daily work schedules follow the above philosophy as well.  A different daily work schedule class could indicate a different shift and unique shift premiums might be apply to that day.

**Daily work schedule class**
- ☑ Daily work schedule class 0
- ☑ Daily work schedule class 1
- ☑ Daily work schedule class 2
- ☑ Daily work schedule class 3

This condition for planned hours can control whether an employee is scheduled to work as a determent or if the employee is at work.  The accrual can also be controlled based on whether it is full or partial day absence.

Condition for planned hours

☐ Planned hours = 0          ☑ Planned hours > 0

Condition for absence/attendance

☑ < 1 day          ☑ Full-day

If a quota is to be tied to an absence, a deduction rule must be specified.

Counting

| Hours | | Days | |
|---|---|---|---|
| Quota multiplier | 100.00 % | Quota multiplier | 100.00 % |
| Rounding rule | | Rounding rule | |
| ⦿ Multiply first | | ⦿ Multiply first | |
| ○ Round first | | ○ Round first | |

Deduction rule

| Absence quotas | | Attendance quotas | |
|---|---|---|---|
| Within entitlement | 001   Vacation | Within entitlement | |
| Over entitlement | | Over entitlement | |

Finally, the counting rule needs to be associated with the absence.

| | |
|---|---|
| PS grouping | 10 |
| A/A type text | 1020 Sick leave |

**Counting/Quota deduction**

| | |
|---|---|
| Counting rule | 110 |
| ☑ Quota deduction | |
| ☐ Deduction over interval end | |

## Deduction Rules

### Define the Deduction Rule

*Menu Path:  Personnel Time Management>Time Data Recording and Administration>Managing Time Accounts Using Attendance/Absence Quotas>Quota Deduction Using Attendances/Absences> Define Deduction Rules for Absence and Attendance Quotas*

The key to the deduction rules is the employee subgroup for quotas, personal subarea grouping for quotas and a sequential number used as the key of the deduction rule.

| | |
|---|---|
| ESG Time quota types | 1 |
| PS grpg tm quota typ | 10 |
| Deduction rule | 001 Vacation |

Each absence quota can be configured to be recorded in either hours or days. If days unit were selected then a partial day absence would not be able to be recorded.  The absence quota and the absence both must have the same recording unit associated with them.

**Unit of relevant absence quota types**

◉ Hours          ○ Days

Absence quotas can be specified in the deduction rule.  The quotas will need to be entered below.

**Absence quota types**

| Absence quota type | Quota text | Unit |
|---|---|---|
| | 02 Prev. year Vacation | Hours |
| | 01 Paid Vacation | Hours |
| | 04 Floating Holiday | Hours |
| | | |
| | | |

Once the quotas to be deducted have been identified above, you can choose the sequence in which the quotas will be deducted.

Quota type sequence for further deduction

- ◉ No further deduction
- ○ Sort all other quota types in ascending order
- ○ Sort all other quota types in descending order

Deduction priority

| Quota types | Priority 1 | | |
|---|---|---|---|
| Valid from date | Priority 2 | ◉ Ascending | ○ Descending |
| Valid to date | Not relevant | ◉ Ascending | ○ Descending |
| Deduction from | Not relevant | ◉ Ascending | ○ Descending |
| Deduction to | Not relevant | ◉ Ascending | ○ Descending |

At least one of the criteria above must be marked as priority 1 for deduction to be made.  Note that deduction from multiple quotas is always done sequentially.  Quota types will be checked in the sequence specified.  The first quota with enough remaining entitlement will be used for the deduction.  It is not possible to deduct from multiple quota types simultaneously.

### Link Deduction Rule to Counting Rule

*Menu Path:  Personnel Time Management>Time Data Recording and Administration>Managing Time Accounts Using Attendance/Absence Quotas>Quota Deduction Using Attendances/Absences> Assign Deduction Rules to Counting Rules*

After the deduction rules have been defined as above, the deduction rule can then be linked to the counting rule.  With this association, the absence that is using the counting rule would have the corresponding deduction rule configured.

Deduction rule

Absence quotas

| Within entitlement | 001 | Vacation |
| Over entitlement | | |

Attendance quotas

| Within entitlement | |
| Over entitlement | |

The deduction rule assignment is at the bottom of the counting rule detail screen. Two different rules can be assigned, depending if the deduction is within entitlement or over entitlement (negative deduction.)  If two different rules are assigned, both must deduct using the same time unit.

# Rules for Generating Absence Quotas

***Menu Path:  Personnel Time Management>Time Data Recording and Administration>Managing Time Accounts Using Attendance/Absence Quotas>Calculating Absence Entitlements>Rules for Generating Absence Quotas.***

In order to set up quota generation rules for employees, the following steps need to be executed:

1. Specify rule groups for quota types.

2. Set base entitlements.

3. Determine validity and deduction intervals.

4. Define generation rules for quotas.

In order to further illustrate how to set up rules for generating quotas, the following example will be used:

**Example:**

ABC Company has a vacation policy that is based on seniority, and employees accrue their vacation days each pay period (which is bi-weekly) over the course of the year. The vacation time is valid from 1/1/XX to 12/31/XX, and employees can carry over a maximum of 5 days, or 40 hours at the end of the year. Employees can also borrow against their accrued vacation (meaning they can go into the negative) for 5 days, or 40 hours. All full-time employees are included in this policy; part-time employees are not eligible for vacation.  The seniority policy is as follows:
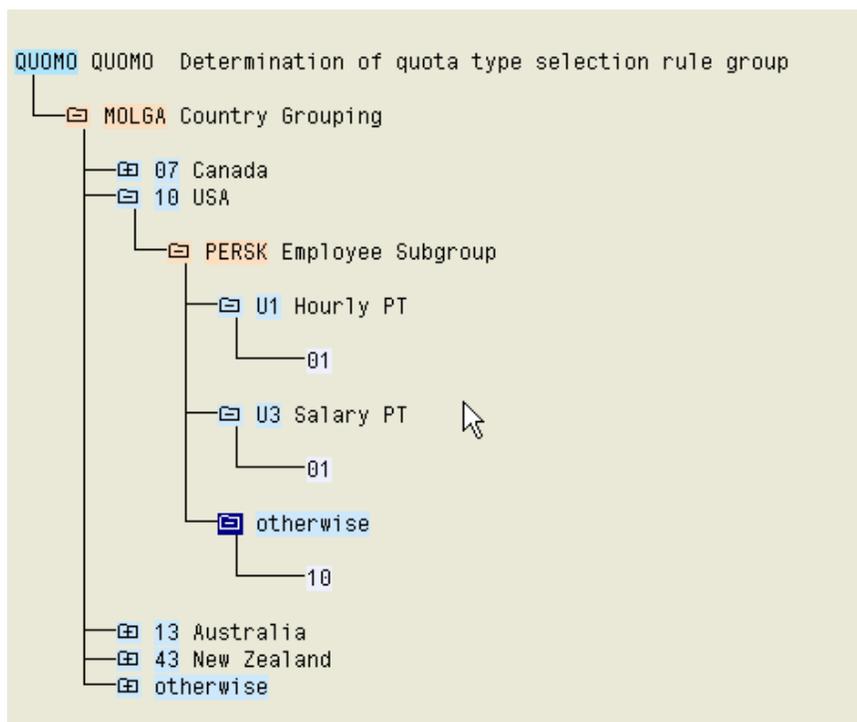
0-3 years = 80 hours

4-6 years=120 hours

7-999 years = 200 hours

## Step 1: Specify Rule Groups for Quota Types

We will use Feature QUOMO to specify rule groups for quota types. Since all employees except part-time employees are entitled to vacation, the Feature will look like this:



This indicates that all employees *except* those that are part-time have a rule group of "10."

## Step 2: Set Base Entitlements

***Menu Path:  Personnel Time Management>Time Data Recording and Administration>Managing Time Accounts Using Attendance/Absence Quotas>Calculating Absence Entitlements>Rules for Generating Absence Quotas>Set Base Entitlements.***

| ESG... | PSG | PSG | Abs.quota | Quota text | Rule | Sequential no. | Start date | End date |
|---|---|---|---|---|---|---|---|---|
| 1 | 10 | 01 | 17 | Floating Holiday | 001 | | 001 | 01/01/1900 | 12/31/9999 |
| 1 | 10 | 01 | 18 | Comp time | 001 | | 001 | 01/01/1900 | 12/31/9999 |
| 1 | 10 | 01 | 20 | ABC vacation | 001 | | 001 | 01/01/1900 | 12/31/9999 |
| 1 | 10 | 01 | 97 | B Test | 001 | | 001 | 01/01/1900 | 12/31/9999 |

ES grpg for time quotas: 1
PS grpg for time quotas: 10
PS grpg for time recording: 01

Absence quota type: 20 ABC vacation
Rule for base entitlement: 001
Sequential number: 001

Start    End
> 01/01/1900 /31/9999

**Base entitlement**

Seniority: - 003 Years
Age: -

**Entitlement**

Constant: 80.00000 Hours
Day balance:
Period balance:

**related to period**

◉ Calendar year
○ Accrual period
○ Time evaluation period
○ Payroll period
○ Other period
○ Rel. to date type
   Lngth

ES grpg for time quotas: 1
PS grpg for time quotas: 10
PS grpg for time recording: 01

Absence quota type: 20 ABC vacation
Rule for base entitlement: 001
Sequential number: 002

Start    End
> 01/01/1900 /31/9999

**Base entitlement**

Seniority: 004 - 006 Years
Age: -

**Entitlement**

Constant: 120.00000 Hours
Day balance:
Period balance:

**related to period**

◉ Calendar year
○ Accrual period
○ Time evaluation period
○ Payroll period
○ Other period
○ Rel. to date type
   Lngth

On this screen, you define the constant amount for the quota based on seniority. In the first screen, you can see that the Sequential Number is 001, the Seniority is 000-003 years, and the Constant is 80.00 hours. In the second screen, the Sequential Number is 002, the Seniority is 004-006 years, and the Constant is 120.00 hours. In the third screen, the Sequential Number is 003, the Seniority is 007-999 years, and the Constant is 200.00 hours.

In the Related to period section, the period is set to Calendar year. This means that the constant  entitlement amounts are for the calendar year, ie. 200 hours per year.

### Step 3: Determine Validity and Deduction Periods

***Menu Path:  Personnel Time Management>Time Data Recording and Administration>Managing Time Accounts Using Attendance/Absence Quotas>Calculating Absence Entitlements>Rules for Generating Absence Quotas>Determine Validity and Deduction Periods.***

In this step, you define the validity and deduction intervals. The deduction interval specifies the period in which the absence quota can be reduced by an absence.  A validity interval is specified for any quota that is generated during time evaluation.  Validity periods can be any of the following:

- A fixed period such as a calendar year or the time evaluation period

- Employee-dependent period, such as the payroll period or the date type

- A period defined in the quota selection rule, such as the accrual period

- A period you have defined in Customizing, such as the period parameter

In our scenario, the validity and deduction intervals are the same – a fixed period of a calendar year.  The screens below indicate how to set up these intervals.

| ES grouping | PS grouping | Absence quota type | Quota text |
|---|---|---|---|
| 1 | 10 | 18 | Comp time |
| 1 | 10 | 20 | ABC vacation |
| 1 | 10 | 97 | B Test |
| 1 | 12 | 01 | Non-working shift entitl. |
| 1 | 12 | 98 | Holidays |

In this case, the validity and deduction intervals are the same since the quota can also be reduced from 1/1/XX- 12/31/XX.

**Note:** One of the more common validity intervals used by customers is fiscal year. Let's assume the customer's fiscal year goes from 4/1/xx – 3/30/xx. In order to set this up, you would make the Valid from and Valid to interval a Calendar year. Under Valid from, select Start, and in the Relative position field enter 3 months; under Valid to, select End, and in the Relative position field enter 3 months. The validity interval will then be 4/1/XX – 3/30/XX.  If the deduction interval is the same, you don't need to change anything.

### Step 4: Define Generation Rules for Quota Selection

***Menu Path:  Personnel Time Management>Time Data Recording and Administration>Managing Time Accounts Using Attendance/Absence Quotas>Calculating Absence Entitlements>Rules for Generating Absence Quotas>Define Generation Rules for Quota Selection.***

In this step, you define all the components of a generation rule, so the quota can be generated automatically in time evaluation.

The first thing you notice about this screen is that it encompasses many of the previous steps. It may be easier for you to perform all of the steps from this view:

Highlight Selection Rules in the Dialog Structure on the left, and highlight an existing entry to copy. Using our example, you should copy an entry with an ESG of 1, PSG for Time Quotas of 10, PSG for Time Recording of 01, and Quota Type Sel.Group of 10.

**Usability Tab**



**Note:** For our example, we don't need to fill in any of the fields in this section, and will use 01/01/1800 – 12/31/9999 as the entry date.

In the Usability section, enter the following fields:

- Earliest accrual date: corresponds to a date on Infotype 0019 – Monitoring of Dates. For example, if the employee's accrual should not start until after they complete a probationary period of time, you can specify the date/deadline type from IT0019 here.

- Entry date: Specify a period of time for which the rule should be applicable based on the employee's entry date. Keep in mind that this date is derived from the entry date on IT0000. (See section in this document on Feature HDATE for more details). If entry date is not relevant, leave the fields blank or use a greater period for the entry date (01/01/1800 - 2/31/9999, for example).

- Challenge Group/Degree of challenge: specify details on the employee's disability, if applicable.

**Accrual Period Tab**



| | | | | Start | End |
|---|---|---|---|---|---|
| ESG for time quotas | 1 | | | | |
| PSG for time quotas | 10 | | | | |
| PSG for time rec. | 01 | | | > 01/01/1900 | /31/9999 |
| | | | | | |
| Quota type sel. grp | 10 | | | | |
| Selection rule | 100 | MR-ABC Vacation | | | |
| Absence quota type | 20 | MR - ABC Vacation | | | |

Usability | Accrual period | Base entitl. | Accrual entitl. | Transfer time | Total entitl.

○ Daily
○ Month
○ Calendar year
○ Time evaluation period
◉ Payroll period
○ Other period
○ Rel. to date type
   Length

**Note:** For our example, select Payroll Period as the accrual period. This represents the employee's payroll period from IT0001.

In the Accrual Period section, select one of the following options:

- Daily: Entitlements are calculated daily. This means the base entitlement for the year is divided by 365 to calculate the daily accrual.

- Month: Period from first day to last day of the month. This means the base entitlement for the year is divided by 12 to calculate the monthly accrual, and the accrual takes place at the *end* of the month.

- Calendar Year: Period of one year, from 01/01/XX to 12/31/XX. This means the base entitlement for the year is accrued at the *end* of the calendar year.

- Time evaluation period: Period determined in time evaluation, defined in the Determine time evaluation period step in the IMG. The accrual takes place at the *end* of the time evaluation period.

- Payroll period: Period determined in payroll; valid payroll period of the day to be evaluated of the payroll area of the employee to be evaluated. The accrual takes place at the *end* of the payroll period.

- Other period: Individually specified period; period parameters are defined in the Define period parameters step in the IMG. This period is particularly useful if you have irregular accrual periods that may begin in the middle of the month. The accrual takes place at the *end* of the period.

- Rel. to date type: Period is defined in relation to a date type from the Date Specifications Infotype (0041). You determine the accrual period using the length field (for example, the date the employee joined the company, with a period of one month.)

## Base Entitlement Tab



**Note:** For our example, select Date Type – Hire Date as the Key date for determining seniority. This means that on the employee's IT0041 record, they must have Hire Date filled in with their original hire date in order to calculate their seniority correctly. Also, any accrual changes in seniority will take effect on the exact hire date. For a detailed explanation of how the system knows which date to use as original hire date, see the section on Feature HDATE in this document.

If the quota is based on seniority, you must choose one of the following options:

- For exact day: This option will use the employee's entry date from IT0000 as the key date for determining seniority. This means any change in the employee's seniority is taken into account within the accrual period.

- Start/End of accrual period: This option will use the employee's entry date from IT0000 as the key date for determining seniority. This means any change in the employee's seniority is taken into account at the start of the next accrual period.

- Start/End of base period: This option will use the employee's entry date from IT0000 as the key date for determining seniority. This means any change in the employee's seniority is taken into account at the start of the next base period.

- Date Type: This option will use a specified date on the employee's IT0041 record as the key date for determining seniority. This means any change in the employee's seniority is taken into account on the date specified in the date type, with the current year.

Quota entitlements based on age are handled in a very similar manner – the same fields apply as with seniority.

     

## Accrual Entitlement Tab



> **Note:** For our example, select Pro rata calculation, No multiplication with time balance, and no reduction rules, rounding rules, or maximum entitlement.

In the accrual entitlement section, you must select either pro rata calculation or No pro rata calculation. Pro rata calculation means in order to determine the appropriate entitlement based on the period, the accrual period is compared with the base period of the quota type currently being processed, and a proportionate accrual entitlement is determined. This is far more widely used than no pro rata, which means the total base entitlement of the quota type currently being processed is always used as the basis for the accrual entitlement.

You can also choose to multiply the accrual by a time balance. If you want to generate the accrual entitlements on the basis of accountable attendance times, enter either a day balance or period balance in the Multiplication by time balance section.

You can use alternative quotas to manage the capping differences that result from deduction or from the maximum entitlement being exceeded. Determine whether you want to store the capping differences and assign the applicable quota types.

**Transfer Time Tab**



**Note:** For our example, select Upon accrual as the transfer time.

In the transfer time section, you must choose one of the following options:

- Upon accrual – Whenever the accrual takes place, it is immediately transferred to the quota.

- Per calendar year – The accrual is transferred at the end of the year, on 12/31/XX.

- Per time evaluation period – The accrual is transferred at the end of the specified time evaluation period.

- Per payroll period – The accrual is transferred at the end of the payroll  period.

- Other period – An individually defined period; the period parameter is set in the *Define Period Parameters* step in Customizing for Payroll.

- Date type – A date type from IT0041 can be specified here as the transfer time.

- Transfer rule - This field is relevant for Australia and New Zealand only. For more information, see **Define Rules for Transferring Quota Entitlements**

## Total Entitlement Tab



| | | | Start | End |
|---|---|---|---|---|
| ESG for time quotas | 1 | | | |
| PSG for time quotas | 10 | | » 01/01/1900 | 12/31/9999 |
| PSG for time rec. | 01 | | | |
| Quota type sel. grp | 10 | | | |
| Selection rule | 100 | MR-ABC Vacation | | |
| Absence quota type | 20 | MR - ABC Vacation | | |

| Usability | Accrual period | Base entitl. | Accrual entitl. | Transfer time | Total entitl. |

Rounding rule
Maximum entitlement ____ Hours

**Note:** For our example, there is no specified maximum entitlement.

In the total entitlement section, you can specify a maximum entitlement and rounding rule for the quota. The maximum entitlement specifies the maximum amount that can be transferred to a quota type. For example, if an employee accrues 7 hours during an accrual period based on their time worked, and this field is set to 6 hours, only 6 hours can be transferred to the quota.

## Time Evaluation Results

Once the previous steps have been completed, you can execute time evaluation for your employees. Since time evaluation was run on 9/15, and this is the end of a bi-weekly pay period, an accrual of 3.07692 hours takes place. This figure was calculated by taking the total annual entitlement of 80 hours and dividing it by 26 (the number of bi-weekly pay periods in a year.)

```
Rule: 100 quota type 20 MR - ABC Vacation
                  Applicability of rule

Condition set for hiring date      01/01/1900 - 12/31/9999    Fulfilled
Condition for challenge group                                 Fulfilled
Condition for degree of challenge       000 - 100 %           Fulfilled
Condition acc. to SAP enhancement                             Fulfilled

Earliest accrual point                                        Fulfilled


                  Generation data

generated                   3.07692  Hours
Maximum entitlement
Operation ID                      +  Increase
Rounding rule
Reduction rule

Accrual period          09/02/2001 - 09/15/2001
Validity interval       08/01/2001 - 12/31/2001
Deduction interval      08/01/2001 - 12/31/2001

Transfer time           09/15/2001
```

This screen shows the bi-weekly accrual, and the transfer time which is also bi-weekly. This means that there is no accrual on days other than the last day of the bi-weekly payroll period.

| 20 | 08/01/2001 | 12/31/2001 | | | 15.38460 | 0.00000 | Hours |

This screen shows the accrual to date – 15.38460 hours.

| Personnel no | 198 | Name | Marisa ... | Status | Active |
|---|---|---|---|---|---|
| EE group | 1 | Company Employ... | Personnel ar | 1010 | Headquarters |
| WS rule | 1005 | Flex Sche... | SSN | 112-45-6787 | |
| From | 08/01/2001 | To | 12/31/2001 | Chg. | 10/09/2001 I012740 |

**Absence quota**

| | |
|---|---|
| Category | 20 ⊕ MR - ABC Vacation |
| Time | - |
| Quota number | 15.38460  Hours |
| Deduction | 0.00000  ⟫ Neg. deduction to    40.00000- |
| Deduction from | 08/01/2001 |
| Deduction to | 12/31/2001 |

This screen shows the employee's IT2006 record based on the last time evaluation run. This is the accumulated entitlement after five pay periods of accrual.

## Carryover of Quotas from Year to Year

One very common requirement for companies is to allow employees to carry over a certain amount of vacation time from one year to the next. SAP offers a standard rule (TQTR) that usually requires several modifications in order to meet company requirements. Since there are several ways to handle quota carryovers, this topic will be covered in detail in the next version of this white paper.

## Features, Functions, and Operations Used in Quota Processing

### Features

### HDATE

Feature HDATE is used to default the appropriate reference date from IT0041 for Time Quotas. This is the date from which the employee's seniority is determined for quota seniority calculations. This can be set to default to the "Date of Hire", or an alternative date created specifically for absence quota purposes. The date type must first be set up on table T548Y. If this feature is not set up correctly to default a date, the system will automatically assume a date derived from IT0000/0001 for the hire date to determine seniority.
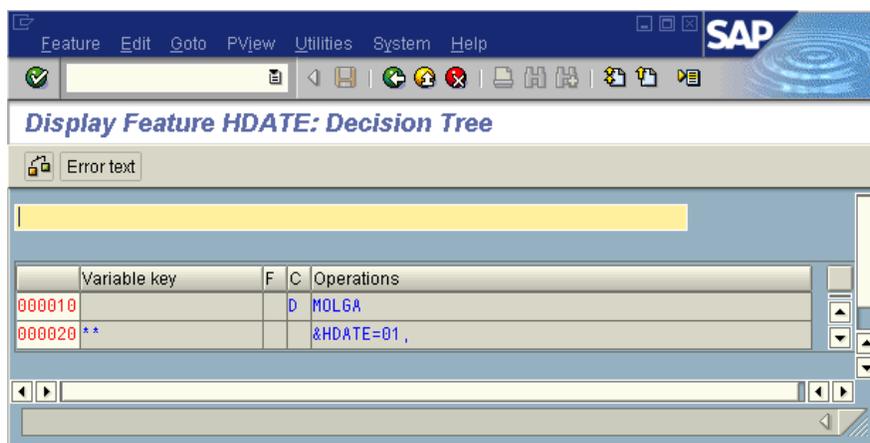


In the above example, HDATE is based on MOLGA (country code). Here, for all countries, HDATE is set to "01". In this case, "01' is the hire date found on IT0041.

Decisions can be made in this feature based on the following fields:

| MOLGA | Country Grouping |
|-------|------------------|
| BUKRS | Company Code |
| WERKS | Personnel Area |
| BTRTL | Personnel Subarea |
| PERSG | Employee Group |
| PERSK | Employee Subgroup |

The feature allows this date to be determined only once for each employee as they are processed each day through SAP Time Evaluation.

Please note: Feature HDATE sets a date to be referenced for the seniority calculation. From this date, SAP will calculate the employee's seniority. This should not be confused with the "Key date for determining seniority" in the base entitlement calculation on table T559L. This field is not the single date set for seniority calculations; rather, it is an option you can use to adjust the seniority calculations by quota. In other words, feature HDATE can be used to set the seniority date for all quotas, and the entry in T559L can be used to make distinctions between date calculations for different absence quotas. The system calculates the

difference between the hire date (date set by HDATE) and the date set on T559L (Key date for determining seniority

## Functions

Time management functions are programs used in the Time Evaluation schemas to manage various processes.  Some of the standard delivered functions are used in the process of calculating and maintaining absence quotas.  The primary function necessary to process absence quotas in Time Evaluation is function QUOTA.  Other functions related to this process are CUMBT and ACTIO.  Below is an example of the standard delivered Time Schema TM04.  All three functions can be seen in this example of the TM04 Time Schema.

```
 Schema   Edit   Goto   Utilities   System   Help        SAP

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 Display Schema : TM04

 📝 🗄

 |                                              Sequence  ▲ ▼

         Func.  Par1 Par2 Par3 Par4  D  Text
 000630  BLOCK  BEG                      Manage time accounts
 000640  RTIP   TR11                     Form day balances
 000650  P2012                           Time transfers
 000660  ACTIO  TR30                     Flextime balance/overtime/productive hrs
 000670  ACTIO  TR33                *    Store special wage types
 000680  LIMIT                           Evaluate value limits for balances
 000690  IF                EOP           Last day of payroll period
 000700  ACTIO  TR90                      Remunerate balance 0005
 000710  ENDIF                           Endif (end of payroll period)
 000720  CUMBT                           Update balances, wage types...
 000730  QUOTA                           Generate absence quotas
 000740  BLOCK  END                      **********************************
 000750  EDAY                            End of day processing
 000760  **                              Last day of time evaluation period
 000770  BEND                            Final processing
 000780  IF                EOM      *    Last day of time evaluation period
 000790  ENDIF                      *    Endif (EOM)
 000800  EXPRT                           Export evaluation results            ▲
                                                                              ▼
                                                                      ◁   //
```

## QUOTA

Function QUOTA is where absence quota generation can be found in the SAP Time Evaluation Schema.  The purpose of function quota is to create an IT2006 record (if necessary), process accruals, process deductions, transfer of time balances and process quota adjustments (through IT2013).  Parameters 1-4 have no significance at this time in reference to function QUOTA.  The generation of Absence Quotas in this function can be explained in terms of Input, Processing and Output.

**Input**

Input to function QUOTA are maintained in the following tables:

- Daily Balance Table - ZES. This table holds daily balances of time types. It is possible to set configuration for the base entitlement to read these balances.

- Period Balance Table - SALDO. This table holds the period balances of time types. It is possible to set configuration for the base entitlement to read these balances.

- Absence Quotas Table - ABWKONTI (IT2006). This table holds the values for IT2006. As an input table, it holds the existing balances prior to running Time Evaluation for the given day.

**Processing**

- Function QUOTA first determines the time quota selection rule for the employee set either in initialization, or in feature QUOMO. This is necessary to determine the generation rule in the next step.

- The next step is the processing of the generation rule. The rule is chosen based on the time quota selection rule and is guided by the corresponding configuration. The generation rule applies the accruals relevant for that particular day.

- Given the existence of IT2013, quota adjustments, processing will take place to make the appropriate adjustments designated on the infotype. IT2013 can be used to add, delete or replace balances for absence quotas. (Initial balances can be converted into the system utilizing IT2013 and allowing Time Evaluation to generate the IT2006's for each employee.)

- Transfer of the accrued amounts in processing takes place given that the appropriate period or limits have been applied based on configuration. If the values are not to be transferred daily (in other words, some other period has been defined in configuration) then the values are held in table QTRANS until the day when transferring is appropriate.

**Output**

Output of function QUOTA is maintained in the following tables:

- Absence Quotas Table - ABWKONTI (IT2006). This table will now hold the adjusted entitlement values in IT2006 (given that they have been affected by quota processing.)

- Accrued Quota Values Table - QTACC. This table shows the total accrued values by absence quota prior to the transfer taking place. This is important to distinguish if the accrual dates are configured differently than the transfer dates.

- Base Entitlement Values Table - QTBASE. This table holds the value of base entitlement (accruals) by day.

- Transfer Pool Values Table - QTRANS. This table will hold values accrued and waiting to be to the employee's IT2006 record. The transfer time can be driven by time periods or limits of accrued amounts, and is defined within transfer rules in configuration.

The results of function QUOTA can be viewed in the respective tables in a number of ways. (1) Within the Time Evaluation log, (2) By directly viewing the B2 clusters, or (3) By utilizing the quota overview screen (transaction code PT50)

Please note:

- Prior to function quota, CUMBT must be processed. This prepares the daily and period balance tables (ZES and SALDO) to be read by function QUOTA. (For more information, see section pertaining to CUMBT below)

- Customized rules that save values to the daily and period balance tables that are referenced in base entitlement configuration should also be executed prior to functions QUOTA and CUMBT. An example of this would be a technical time type that holds accrual values based on hours worked. This accrual value could not be set in configuration alone because hours would vary based on

employee by day worked.  In this case, a customized rule would be necessary to accumulate the hours worked for the employee and the resulting accrual calculation would be placed in the technical time type designated in configuration.  Once again, this would have to be done prior to function QUOTA and CUMBT for the value to be considered in quota generation.  Such a rule would utilize function ACTIO.  (For more information, see section pertaining to ACTIO below)

## CUMBT

Function CUMBT relates to absence quota processing as it updates and saves the values in the daily balance and period balance tables (ZES and SALDO).  This is necessary if the balances held here are utilized in the base entitlement configuration.  Whether or not a time type stores values in these tables is determined in T555A.  Parameters 1-4 have no significance at this time in relation to function CUMBT.

## ACTIO

Function ACTIO calls and processes a personnel calculation rule. The name of the personnel calculation rule is stored in parameter 1. Parameter 2 is used to determine processing for the rule per absence. The possible values for parameter 2 are as follows:

- "space" indicates that the rule is called once only, regardless of whether or not there is an absence.

- "AB" indicates that the rule is called for each absence on the current day. If there are no absences, the rule is not processed.

- "PR" indicates that the rule is called for each attendance on the current day. If there are no attendances, the rule is not processed.

Parameters 3 and 4 have no significance at this time.

Customized rules can be written to calculate accrual amounts and/or accumulate balances in time types referenced in base entitlement configuration. The name of the rule would be found in parameter 1. A customized rule for this purpose would have to be placed before functions CUMBT and QUOTA in the Time Evaluation Schema for the results to be available for that day's quota processing.

### Operations

Operations are used in the Time Evaluation Schema. They are found within Personnel Calculation Rules. These operations can be used in customized rules to manipulate time type balances for absence quota purposes. Some of the basic operations related to absence quotas can be found below.

### UPDTQ - Update Absence Quota

The operation can be used to automatically update the employee's entitlement to specific absence quotas. This can be used outside the functionality of updating the employee's absence quotas in Function QUOTA. Oftentimes this is used for purposes of calculating time off for overtime worked. The IT2006 record must exist prior to this operation before UPDTQ can update the record. (It does not have the ability to create an IT2006 if one does not already exist for the employee)

### VARST - Provide General Fields

This operation can be used in a rule to read fields that may otherwise be unrelated to absence quotas. Because this operation provides access to a wide range of fields, it allows a great deal of flexibility in calculating the base entitlement for the employee. The operation can be used in the process of populating time types designated in configuration.

### OUTAQ - Retrieve Information from Absence Quotas

This operation can read values stored in ABWKONTI (IT2006). A specific quota type can be designated. It can also be used to determine whether a quota type exists and return of value of "Y" or "N" in the variable key.

### OUTTI - Retrieve Fields from IT0007

This operation can be used to retrieve values from the Time Recording Infotype (IT0007). Various fields can be accessed and used in the variable table key.

### HRS – Change/Compare Hours Field

This operation can be used to change the number of hours field or to compare it with other values. HRS may or may not be a decision operation, depending on the parameters set. There are two operators specifically related to absence quotas. They are HRS=Q and HRS=F.

HRS=Q can be used in conjunction with function P2006 to provide data from ABWKONTI (IT2006). This includes (1) Number of approved hours (2) Number of hours already used (3) number of hours not yet used (4) Difference between end time and start time (5) Start time of quota (6) End time of quota.

HRS=F can be used to provide additional information from IT2006. Designations within the syntax of this operation allow you to query specific information. The type of information is determined, as well as indicating which quota types to query, and finally which records to identify when multiple occurrences exist. Placement of this operation is very important, as much of the data that can queried is not valid until after function QUOTA has been processed in the schema. Also note, in some cases, this operation needs to be used in conjunction with P2006.

**Note:** As of version 4.6, documentation on Time Functions and Operations can be found through transaction code PDSY.

## Front Loading vs. Accrual of Entitlements

The timing of the granting of the entitlement is important. This is usually dictated by the company policy. Front loading allows the employee to use the entitlement at any time after the beginning of the accrual validity. Accrual will gradually increase the amount of quota entitlement over the accrual period of the quota.

Front Load Example: An employee is entitled to 80 hours of vacation during the calendar year. If the entitlement is front- loaded, then the employee will receive the full 80 hours of vacation on January 1st. He may then take the first two weeks (80 hours) of January off for vacation, which will leave him no vacation to use for the rest of the calendar year.

Accrual Example: As in the front load example, the employee is entitled to 80 hours of vacation during the calendar year. However, the entitlement is accrued per pay period over the course of the year. If the employee is on a biweekly pay cycle (26 pay periods per year), then each pay period he will receive 3.08 (80/26) hours of vacation. In this case, if the employee took the first two weeks of January off for vacation, then his vacation balance would be negative (i.e. allowing absence above the entitlement). This may be configured at the time each quota type is created in the IMG. For quota types configured this way, it is important to understand that over time, as the accrual continues to add to the entitlement, this negative amount will gradually decrease until it is either zero or positive.

If a quota is not allowed to become negative, then it is still possible to back date an entry once the accrual becomes available. Going back to our example, assume the employee takes only the first week (40 hours) of January off for vacation. If negative accruals are not allowed, then he will not be allowed to record this time. However, in July, when the accrual reaches the 40 hours needed, he can then go back and record vacation for the first week of January. This is possible in our example because the quota is for the calendar year. One possible way to avoid this is to limit how far in the past time can be entered. This can be done easily using CATS data entry profiles.

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