

# Design Your Own Personnel Calculation Rule



## Applies to:

SAP HR \ SAP HCM – Time Management and Payroll. For more information, visit the [Enterprise Resource Planning homepage](#).

## Summary

Comply with your client's Time Management and Payroll requirement by designing PCR's and including it in your Time Evaluation \ Payroll Schema Frequently asked question in SAP HR is how to write a PCR for Time Management and Payroll. This document explains how to write a new PCR for a simple scenario. It will be useful for consultants having prior knowledge in Time Evaluation \ Payroll execution and flow.

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## Introduction

PCR's can be designed using object Operations. SAP has provided standard operations which can meet most of the requirements. Available operations can be viewed in PE04. In any case if the SAP provided operations don't meet the requirement custom operations can be created to meet the requirement.

## Scenario

Starting 01<sup>st</sup> June 2009, new allowance need to be paid to employees belonging to 3050 PA and GA & GC ESG. Allowance will be percent based on Gross Pay. Allowance percentage differs according to the ESG.

Before designing the PCR, draw a tree diagram to decide the options

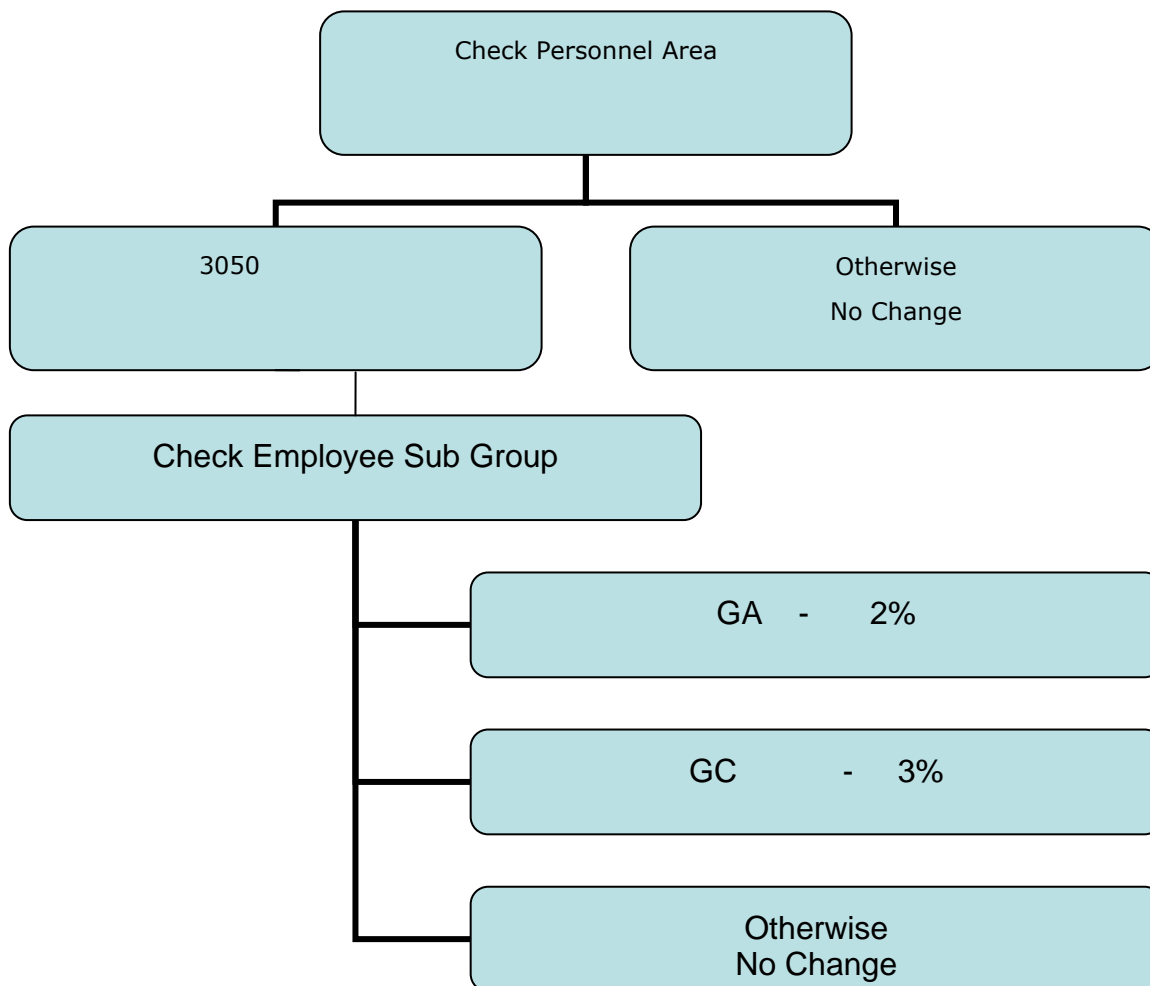


Figure 1 : explains the options available and how the PCR will be designed

Prepare the pre requisites to design the PCR

Create a new wage type, for example I have created 9020 allowance wage type

### Quick Tip !

Allowance percentage may change over a period of time. If the percentage is included in the PCR then the PCR will need to be changed frequently, to avoid this change it will be better if the percentage is maintained as a constant in table T511K, so that the PCR can retrieve the value from the table. The other advantage of holding the percentage in the table is the history of change in percentage can also be maintained in the constants table with the date available which will not be possible in the PCR.

## New Entries: Overview of Added Entries

Constant	Info	Payroll constant	Start Date	End Date	Value
ZTST1		GB PCR Test - 1	01.01.2009	31.12.9999	2,00
ZTST2		GB PCR Test - 2	01.01.2009	31.12.9999	3,00

Tcode PE02

Type a new name and select 'Create'

## Personnel Calculation Rules : Initial Screen

Rule  Personnel Calculation Rule ZTST

Subobjects

Source text

ESGrp grouping

Wage/time type

Attribute

Documentation

This will take you to the attributes screen

## Edit Rule: Attributes

Documentation

Rule  Personnel Calculation Rule ZTST

Attributes

Program class

Country grouping

Person responsible

Changes only by person responsible

Select Program Class 'C' for Payroll and 'T' for Time Management

Select the country grouping for which the PCR is being designed

Now in the main screen select source text and select 'Change'

### Personnel Calculation Rules : Initial Screen

Rule **ZTST** Personnel Calculation Rule ZTST

Create

Subobjects

Source text

ESGrp grouping 3

Wage/time type /101

Attribute

Documentation

Display Change

Select ZTST and 'Create'

### Maintain calculation rule: ZTST

ZTST Personnel Calculation Rule ZTST

Enter the employee sub group grouping if the PCR is applicable for a selected group of employees otherwise enter an asterisk.

### Maintain calculation rule: ZTST

ZTST Personnel Calculation Rule ZTST

Select the ESG grouping, select 'Create', select sub level and enter the wage type for which the PCR is applicable, otherwise enter 4 asterisks.

### Maintain calculation rule: ZTST

ZTST Personnel Calculation Rule ZTST

3

/101 Total gross

The above steps will be general for any PCR creation.

Now we need to build the PCR further to meet the requirements.

In the tree diagram initially the Personnel Area of the employees was checked

Go to PE04 select object class Payroll, object type operations and view the drop down list

### Maintain Functions and Operations

Activate all

Input parameters    Output parameters

Name

Object class

Payroll

Time management

Object Type

Function

Operation

Create    Change    Display    Delete

Scroll through the list and check if any of the operations meet your requirement

Payroll operations (2) 447 Entries found

Restrictions

Name	Description
OFKOD	OFKOD
OPIND	OPIND: Evaluate operation indicator
OUTDP	Read data from table DPS
<b>OUTWP</b>	<b>OUTWP - Load workplace and basic pay data</b>
OUTZL	Retrieve information from time wage types
OVTCR	Compensate overtime credit                    -> PDC
P0304	P0304: Process reduction from IT0304
PAYTP	PAYTP: Set employee subgroup grouping for pers.calc.rule
PCPAR	PCPAR: HR-PT: Read relevant configuration for CA processing
PCY	PCY: Run personnel calculation rule
PENST	PENST
PEVLA	PEVLA: HR-PT: Evaluate lunch allowance
PLOOP	PLOOP : A command sequence is carried out n times
PLPAR	Reads the parameters related to vacation allowance processing
PNEWP	PNEWP: HR-PT: Check for new workplace
PPADJ	PPADJ: Reduce OT entries according to time units
PPENS	HR-PT: Determines if EE is in a retiring situation
PPPAR	PPPAR: Read partial period parameters
PRATE	PRATE : Factor amount

447 Entries found

OUTWP is a common operation used for checking the basic credentials of an employee

Checking the dictionary of the operation OUTWP, we can see the options that can be met.

00000	OUTWP	Name of operation
vvvvv	ABART	Employee subgroup grouping- Personnel calculation rule
	PAYSB	Payroll area****)
	EMPLR	Employment contract
	ATIND	Additional Time Management (0007*)
	PARTT	Part-time from (0007*)
	WEEK	Working week from (0007*)
	PLTSC	Personnel subarea****)
	PLANT	Personnel area****)
	COMPY	Company code****)
	COSTC	Cost center

In the PCR select the WT, press creates at sub level. 10 character spaces will open,

**Maintain calculation rule: ZTST**

We need to fill the variables, OUTWPPLANT in the space and press enter

When the operation and variable OUTWPPLANT is filled, a four character 'space' will automatically open as a sub level

**Maintain calculation rule: ZTST**

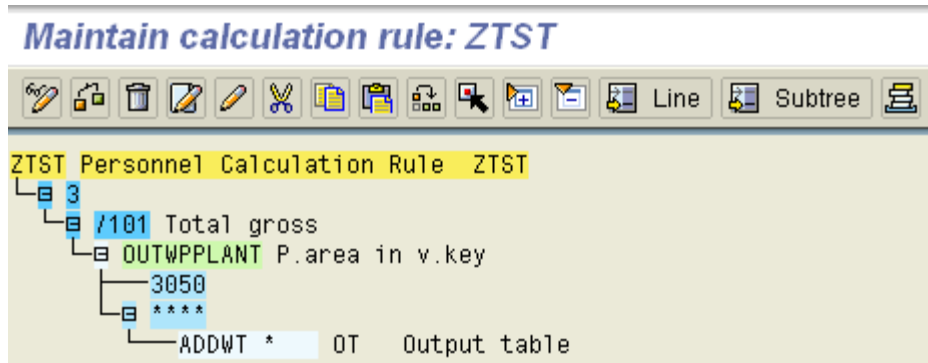
Enter the Personnel Area code in the 'space'

Two personnel area's as per the tree diagram, one is actual personnel area and other one is 'otherwise'

**Maintain calculation rule: ZTST**

According to the tree diagram if the personnel area is 3050 check for the employee group. If it is 'otherwise' PCR should exit without any changes.

Select the asterisks create at sub level.



ADDWT – add wage type. This moves any wage type for which the PCR is designed to output table without making any changes

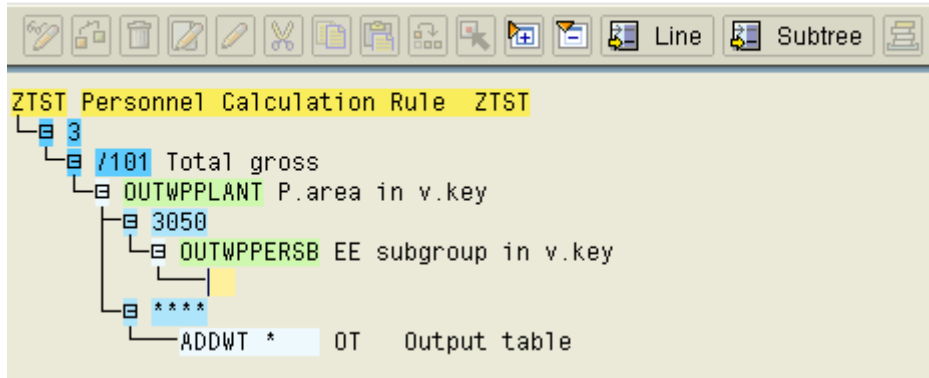
Now select 3050 and create at sub level.

Use operation OUTWP to check the employee sub group

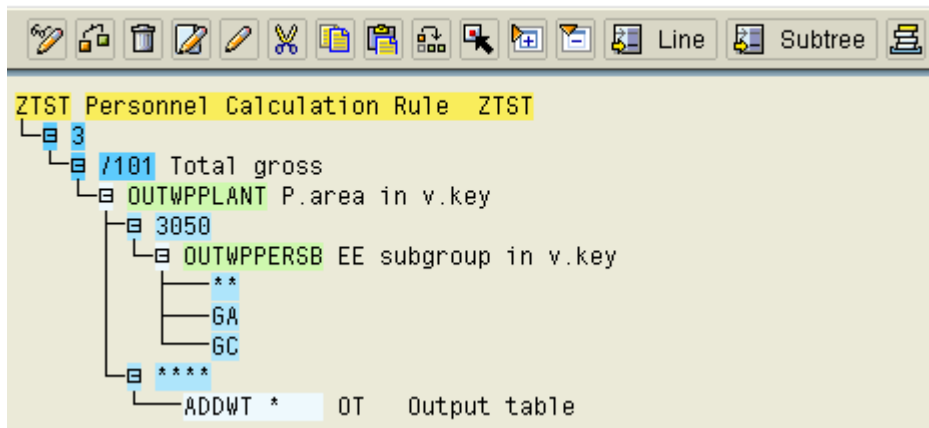
00000	OUTWP	Name of operation
VVVVV		
	ABART	Employee subgroup grouping- Personnel calculation rule Payroll area***)
	PAYSB	Payroll area***)
	EMPLR	Employment contract
	ATIND	Additional Time Management I0007*)
	PARTT	Part-time from I0007*)
	WEEK	Working week from I0007*)
	PLTSC	Personnel subarea*****)
	PLANT	Personnel area*****)
	COMPY	Company code*****)
	COSTC	Cost center The variable key has 8 characters, the cost center has 10 characters. Use the operations VALEN and Operation VAOFF to select the section to be transferred from the cost center and placed in the variable key
	COSTD	Cost distribution indicator An 'X' is placed in the variable key if IT 0027 (cost distribution) exists for the EE, otherwise an '**' is entered.
	CTYMO	Country modifier for wage types
	<u>PERSG</u>	<u>Employee group</u>
	PERSB	Employee subgroup
	SHIFT	Shift indicator
	JOBNO	Job
	TRFAR	Pay scale type
	TRFGB	Pay scale area
	TRFGR	Pay scale group
	TRFST	Pay scale level

A two character space will open at the sub level where we need to fill the employee sub group



**Maintain calculation rule: ZTST**

I have created three options as per the tree diagram

**Maintain calculation rule: ZTST**

Check PE04 for available operations to check the amount and number in the PCR

Name	Description
NUM	NUM: Calculations in the current number field

Name	Description
AMT	AMT: Calculations in the current amount field

Select GA and create sub level

## Maintain calculation rule: ZTST

```

ZTST Personnel Calculation Rule ZTST
├── 3
│   ├── /101 Total gross
│   │   ├── OUTWPPLANT P.area in v.key
│   │   │   ├── ****
│   │   │   │   └── ADDWT * OT Output table
│   │   │   └── 3050
│   │       ├── OUTWPPERSEB EE subgroup in v.key
│   │       │   ├── **
│   │       │   │   └── ADDWT * OT Output table
│   │       │   ├── GA
│   │       │   │   ├── ADDWT * OT Output table
│   │       │   │   ├── NUM=KZTST1 Set
│   │       │   │   ├── AMT= /101 Set
│   │       │   │   ├── MULTI NAA Multipl.amt/no/rate
│   │       │   │   ├── ZERO= N AmtNumRteTime = 0
│   │       │   │   └── ADDWT 9020 OT Output table
│   │       │   └── GC
│   │       │       ├── ADDWT * OT Output table
│   │       │       ├── NUM=KZTST2 Set
│   │       │       ├── AMT= /101 Set
│   │       │       ├── MULTI NAA Multipl.amt/no/rate
│   │       │       ├── ZERO= N AmtNumRteTime = 0
│   │       │       └── ADDWT 9020 OT Output table

```

ADDWT \* - moves the /101 wage type back into the internal table

NUM = kztst1 ( K variable reads table T511K)

Enter AMT = /101 (gross WT)

MULTI NAA – Multiply number by amount and store the value in amount

ZERO = N – removes the number from the wage type ( percentage )

ADDWT – add the amount to wage type 9020

Repeat the same to employee sub group GC with the respective constant name.

Enter the custom build PCR into the schema, where /101 wage type is available

**Edit Schema: GAL0**

Line	Func.	Par1	Par2	Par3	Par4	D	Text
000010	COM						*****
000020	COM						Factoring and Storing: Great Britain.
000030	COM						*****
000040	BLOCK	BEG					GB factoring and storing
000050	GEN/8	6					Generate WT's /801 to /816 in IT
000060	PIT	GPPF					Determine partial period factors
000070	PIT	XCM0	P31				Monthly lump sum payments for cost acct.
000080	PIT	GVAL	P10				Evaluate wage components
000090	ACTIO	XCH0	A				Hourly rates for cost accounting
000100	P0793						GB payment in error
000110	PIT	X023	P20	NOAB			Gross input and storage
000120	PIT	ZTST					Test
000130	ACTIO	6023					Generate WTs /202 and /203 for zero pay
000140	ACTIO	6043					Calculation of hours worked
000150	BLOCK	END					End of GB factoring and storing

This is how the PCR will be processed during the payroll execution

**Detail View of Log**

Rule	ESGPCR	VaKey	Operation
ZTST	3		OUTWPPLANT
ZTST	3	3050	OUTWPPERSB
ZTST	3	3050 GC	ADDWT *
ZTST	3	3050 GC	NUM=KZTST2
ZTST	3	3050 GC	AMT= /101
ZTST	3	3050 GC	MULTI NAA
ZTST	3	3050 GC	ZERO= N
ZTST	3	3050 GC	NEXTR A
ZTST	3	3050 GC	ADDWT 9020

RT

## Detail View of Log

Table RT				
A	Wage Type	APC1C2C3aBKoReBTAwvTvN0ne	Amount/One Number	Amount
*	/101	Total gross		1.200,00
*	/105	Working net		936,00
*	/111	Pensionable		1.200,00
*	/121	Taxable pay		1.200,00
*	/131	NIable pay		1.200,00
*	/132	Regular NIa		1.200,00
*	/141	Arrestable		936,00
*	/501	Tax paid		264,00
*	/550	Statutory n		972,00
*	/559	Bank transf	01	972,00
*	/560	Amount paid		972,00
*	/700	WT plus ER		1.236,00
*	/840	Diff.curr.f01	4,00-	
*	/844	Paid holidaa01	7,50	
*	/845	Total paid 01	7,50	
*	/851	Total hours	157,50	
*	9020	Sp1.Allowan		36,00
3	/001	Valuation b01	7,10	
3	/003	Valuation b01	54,55	
3	/005	Valuation b01	7,08	
3	/010	Daily Rate 01	387096,77	
3	/011	Daily Rate 01	387096,77	
3	/012	Daily Rate 01	387096,77	
3	/013	Daily Rate 01	387096,77	
3	/250	Salary summ		1.200,00
3	1002	Salary 01		1.200,00

Wage type 9020 generated.

## Related Content

For more information, visit the [Enterprise Resource Planning homepage](#).

For more information, visit the [Business Process Expert homepage](#).

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