

Personnel Calculation Rule and Schema – An Understanding



Applies to:

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

Summary

Personnel Calculation Rule and Schemas are the basis for Payroll Calculation and Time Evaluation. This document describes in detail the aspects of Personnel Calculation Schema and Rules.

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Author Bio

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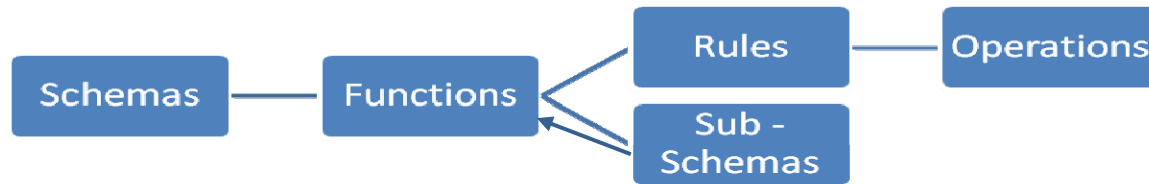
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Introduction

Schemas and Rules form the basis for calculating Payroll and Time Evaluation.

Process flow for Schemas and Rules



Schemas call a Sub – Schema or a Rule using a Function.

Sub – Schema is a Schema on its own, when included in a Schema it's called a Sub – Schema.

Rules in turn do the calculations using the Operations.

SAP has delivered Functions and Operation to meet all the scenarios, in case the available Functions or Operations doesn't meet any of the requirements, it's possible to create custom Function and Operation

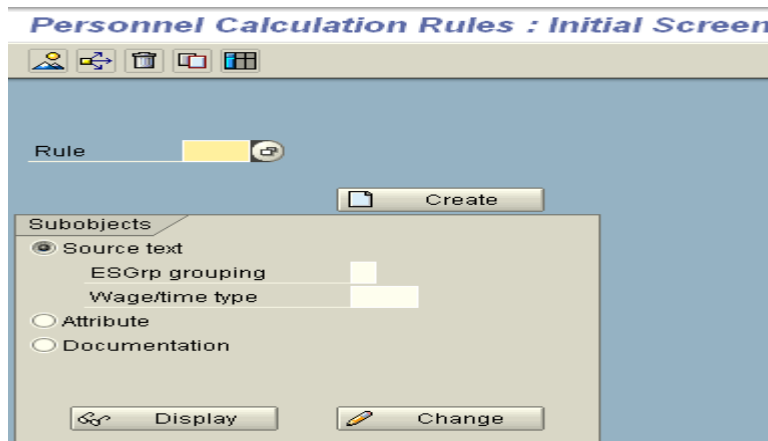
Personnel Calculation Rules

Rules are collections of operations. Using operations Rules perform the basic calculations for payroll or time evaluation

Rules can be of two groups. One group takes a decision and the other group manipulates the wage types.

Working with Personnel Calculation Rules

Rules can be created, modified and viewed in Transaction Code PE02



Personnel Calculation Rules : Initial Screen

This screenshot shows the initial screen for creating or editing a Personnel Calculation Rule (PCR). The interface includes a toolbar with icons for navigation and actions. Key elements and their functions are detailed in the callouts:

- Copy an existing PCR:** Points to the 'Copy' icon in the toolbar.
- PCR view – Table or Tree Structure:** Points to the 'View' icon in the toolbar.
- Name of the PCR:** Points to the 'Rule' field.
- Used to create a new PCR:** Points to the 'Create' button.
- Source Text will allow you to edit the PCR:** Points to the 'Source text' radio button under the 'Subobjects' section.
- EE sub group grouping for which the PCR is applicable:** Points to the 'ESGrp grouping' dropdown.
- Wage Type for which the PCR is applicable:** Points to the 'Wage/time type' dropdown.
- Attributes of the PCR:** Points to the 'Attribute' and 'Documentation' radio buttons.
- Documentation for the PCR:** Points to the 'Documentation' radio button.
- View the PCR:** Points to the 'Display' button.
- Change the PCR:** Points to the 'Change' button.

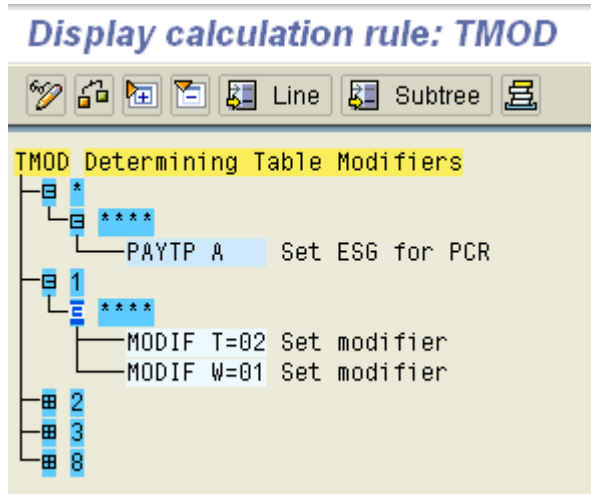
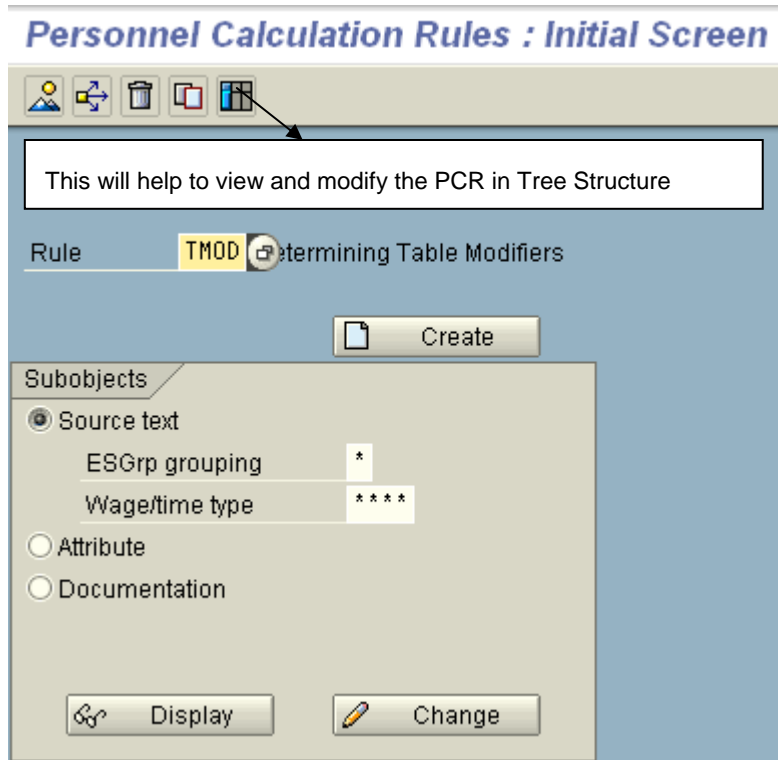
Attributes of the PCR

Display Rule: Attributes

This screenshot displays the 'Attributes' of a specific PCR rule, 'ZST1 Personnel Calculation Rule ZST1'. The interface is divided into several sections:

- Documentation:** A button to view the rule's documentation.
- Rule:** A field containing 'ZST1 Personnel Calculation Rule ZST1', with a callout indicating it is the 'Detailed Description'.
- Attributes:**
 - Program class:** Set to 'T' (Time management), with a callout explaining that 'T' is for TM and 'C' is for PY.
 - Country grouping:** Set to '*' (All Countries), with a callout for 'Country Grouping'.
 - Person responsible:** A field for the 'SAP User'.
 - Changes only by person responsible:** A checkbox option.
- Administrative info:**
 - Created on:** A date field.
 - Last changed by:** A field for the user, followed by 'On' and a date field, and 'At' and a time field.

PCR's can be handled in two different formats



Personnel Calculation Rules : Initial Screen

This will help to view and modify the PCR in Table Format

Rule **TMOD** Determining Table Modifiers

Create

Subobjects

- Source text
 - ESGrp grouping *
 - Wage/time type ****
- Attribute
- Documentation

Display Change

Display Rule: TMOD ES Grouping 1 Wage Type/Time Type ****

Cmmnd Stack

Line	Var.Key	CL	T	Operation	Operation	Operation	Operation	Operation	Operation	*
000010				MODIF T=02	MODIF W=01					

Finally write the documentation

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

Documentation Personnel Calculation Rule ZTST (EN)

Link 

Name

Object
Personnel calculation rule for payroll

Use
* TEST * calculates additional payment for EE belonging to 6C PY area

Access
Text

Procedure
checks the Personnel Area, EE sub group and PY Area. Retrieves the percentage from T511k table and calculates on Gross WT and populates in a new WT

Requirements
Text

See also
Links

Personnel Calculation Schema

Schema is a set of instructions on how to calculate Working Time \ Payroll. These instructions are grouped in a sequential manner.


Schema is a collection of Functions executed in a specific order

Schema consists of, Sub – Schemas and Personnel Calculation Rules queried using Payroll Functions.

Schemas will be called for Time or Payroll calculation by the respective programs

RPTIME00 will call the Time Schema

HR TIME: Time Evaluation

Further selections  Search helps

Selection
Personnel Number

Parameters for time evaluation

Evaluation schema	TM00
Time statement variant	SAP&TEDT
Layout for log	<input type="text"/>
Forced recalculation as of	<input type="text"/>
Evaluation up to	<input type="text"/>

Program options

Display log

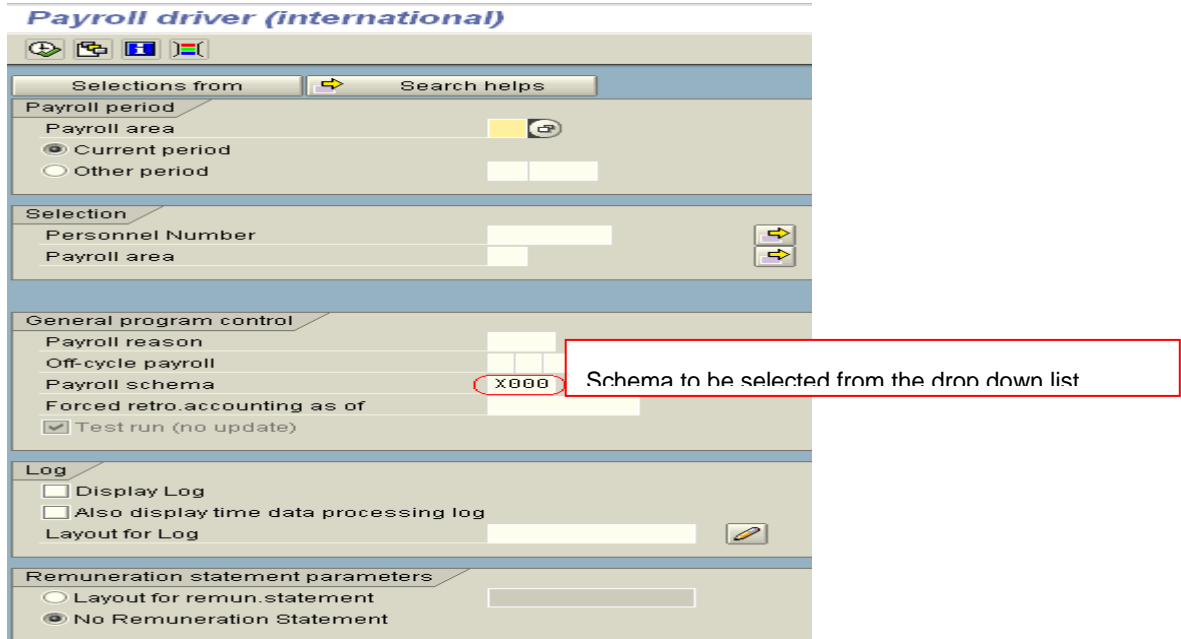
Test run (no update)

Stop at function/operation BREAK

Stop at fixed positions in time evaluation

Schema to be selected from the drop down list

RPCALCxx will call the Payroll Schema (XX stands for the country version, e.g. for USA – RPCALCU0)

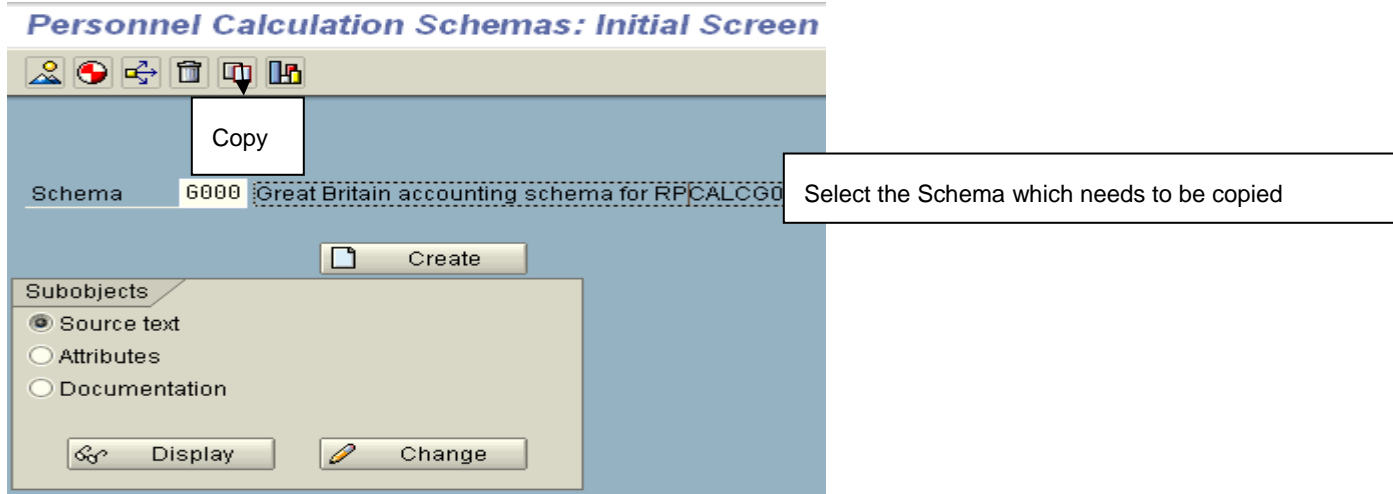


Time Evaluation and Payroll drivers will exhibit only the respective schemas in the drop down list

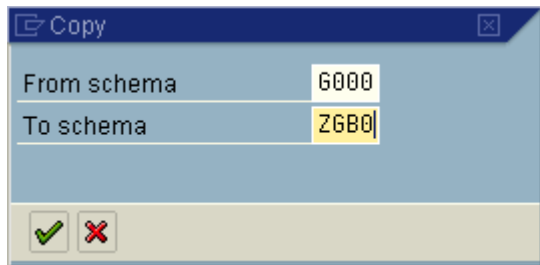
Working with Schemas

When it's required to work with a schema, it's advisable to copy the standard schema and work with the custom schema. This will help us to have a back of the original schema

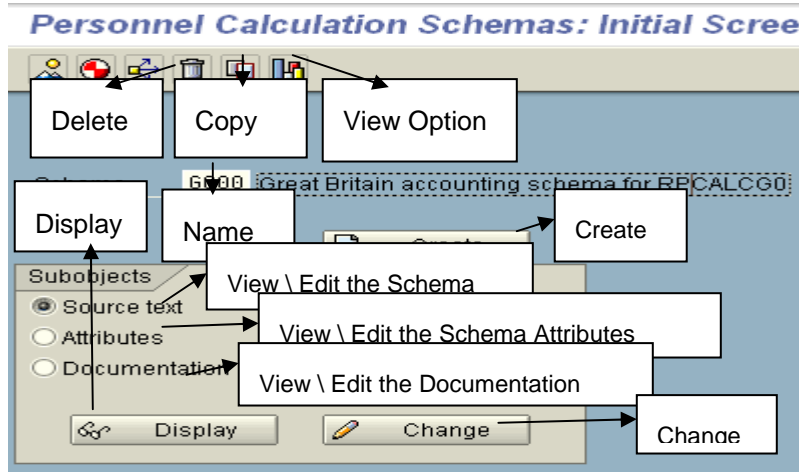
Go to Tcode PE01



A new screen will pop with asking for the name of the new schema



There are three options available in the initial screen



Source Text will allow changing the schema

Edit Schema: ZGB0

Line	Func.	Par1	Par2	Par3	Par4	D	Text
000010	COM						Activate P0003 check in XIN0 for prodn.
000020	COM						*****
000030	COM						Payroll schema: Great Britain standard
000040	COM						Status.....: Jun'99 - 4.6A release
000050	COM						*****
000060	COPY	XIN0					Initialize payroll
000070	COPY	GBD0					Processing of basic data
000080	COPY	GMEI					Multiple Employment Initialisation

Attributes will allow changing the characteristics of the schema

Edit Schema: Attributes

Documentation

Schema **Z6B0** Great Britain accounting schema for RPCALCG0

Attributes

Program class **C** Payroll
 Country grouping **08** Great Britain
 Schema can be executed
 CE Schema

Person responsible

Changes only by person responsible

Administrative info

Created on
 Last changed by On At
 Version **1**

Program Class – decides whether the schema is Payroll or Time Management Schema. ‘C’ stands for Payroll and ‘T’ stands for Time Management

Country Grouping – decides the schema is available for which country. Time Management schemas will usually have ‘***’ since it will be available for all the countries.

Person responsible – shows the person who has created the schema

Changes only by person responsible, if checked, will not allow anyone else to make modification to the schema

Administrative Info – will tell about the version and the person who made the last changes.

Schema Explained

Edit Schema: GT00

Cmmnd Stack

Line	Func.	Par1	Par2	Par3	Par4	D	Text
000040	BLOCK	BEG					Gross payment (time management)
000050	PRINT	NP	PCI				Personal calendar: Annual display
000060	PRINT	NP	PCIP				Personal calendar: Periodic display

There are eight columns in the schema.

Column one consists of the Line Number

Column two consists of the Functinos.

Next four columns carry the Parametres in relation to the function that is being called.

Columb ‘D’ is where the decision is taken on a particular line

Text column consists of an explanation of the action that is being performed in the line.

Parametres

Functions will work based on the Parametres one to Four.

000120	UPAR1	DIF	1	22	B	Override parameters for retro difference
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It is not mandatory that all four parameters needs to be used for even function.

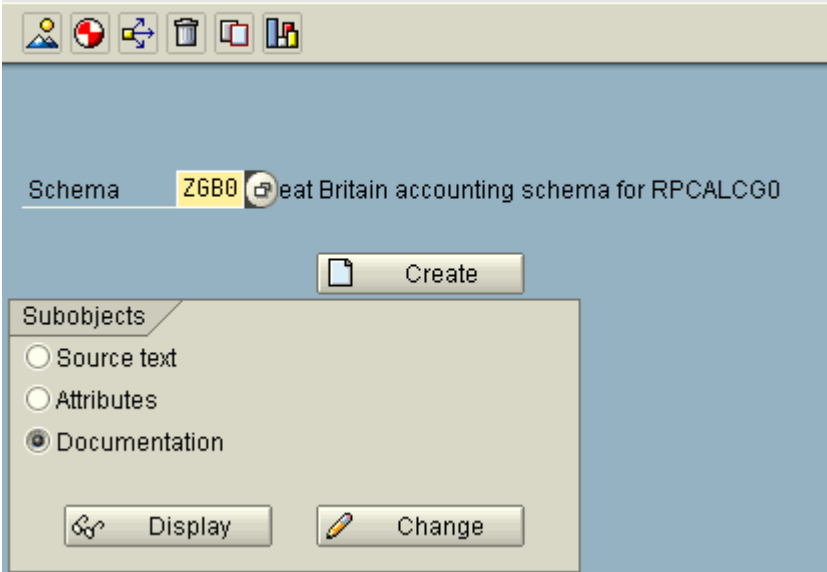
000080	P0014	GP11	GEN	NOAB		Read in recurring payment/deductions
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In the above screen shot, Infotype 0014 is accessed through Function P0014 using GP11 PCR in Par 1, in Generic Mode (irrespective of WT or processing class) according to the Par 2 and for all the employees sub groups by mentioning NOAB in Par 3

Parameters will be used as per the characteristic of the Function

Finally write documentation

Personnel Calculation Schemas: Initial Screen



Schema **ZGB0** Great Britain accounting schema for RPCALCG0

Create

Subobjects

Source text

Attributes

Documentation

Display Change

Documentation Great Britain accounting schema for RPCALCG0 (EN)

Link

Schema for Payroll Report RPCALCG0 (Great Britain)

Schema Type

Main schema for payroll accounting

Use

The schema ZGB0 contains the components necessary to calculate full net pay remuneration. This schema serves as a model for GB customers.

Structure

Schema ZGB0 is divided into several well-structured subschemas.

See also

All subschemas and rules beginning with G.

Functions and Operations

Functions

A schema is a collection of functions arranged in a logical manner. SAP has provided functions which will meet most of the scenarios. Some functions will be country specific and some others will be commonly used.

Functions provide high level logic for payroll \ time calculation

A function works based on the ABAP coding written specific for the function. By mentioning ABAP coding it also needs to be mentioned that a Schema Function is different from the ABAP Functions.

The available functions can be viewed in transaction code PE04.

Operations

Operations are the smallest object in process. Operations are similar to Functions.

Operations do the final mathematical calculation in Payroll or Time Evaluation. They perform the basic logic of calculations.

Operations works based on the ABAP coding written specific for the function.

Available operations can be viewed in transaction code PE04

Custom Functions and Operations

Functions and Operations can also be created according to the client requirements. There are two steps in creating a Custom functions and Operations

- ✚ Custom Functions and Operations should be created through transaction code PE04. By mentioning the country to which it belongs, Input parameters and the Output Parameters for the function.
 - Functions and operations created for Time Management will create a form in program RPTMOZ00
 - Functions created for Payroll will create a form in program PCBURZxx0, where xx is the country code (US, GB)
- ✚ ABAP coding needs to be designed according to the requirement in the form created in the appropriate program
- ✚ If the Function has been created as ZTEST the form will be created as FUZTEST
- ✚ If the Operation has been created as ZTEST the form will be created as OPTTEST

Related Content

Please include at least three references to SDN documents or web pages.

<http://www.sdn.sap.com/irj/scn/index?rid=/library/uuid/80abe2bc-138b-2c10-94a7-c19fd32540bb&overridelayout=true>

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