

RE SAPDBPNPCE

Short Text

HR Master Data (Incl. Concurrent Employment)

Purpose

The PNPCE logical database supports the evaluation of HR master data. It includes the functions of the PNP logical database and offers additional evaluation options. Therefore, you should use the PNPCE logical database instead of the PNP logical database for all new developments.

The enhanced functionality of PNPCE in comparison to PNP essentially concerns the evaluation of Concurrent Employment, that is, the possibility to group evaluate several assignments/personnel numbers of a person. The new events 'GET PERSON' and 'GET GROUP' as well as an enhanced syntax for the INFOTYPES statement (addition AS PERSON TABLE) for the procurement of infotype data enable you to use the new functionality. The use of these new functions is optional. You can run a PNPCE report that does not use the new events and the addition for the INFOTYPES statement in a PNP-compatible session. Since the PNPCE also has an improved selection screen, each report benefits from this even if the report does not use the functions for evaluating Concurrent Employment.

Prerequisites

A report that wants to use the PNPCE must enter this in its report attributes under Logical database.

In addition, the PERNR structure must be declared in the report using the 'TABLES PERNR' statement. You can only use the PERNR structure again in certain circumstances. The use of the 'GET PERNR' event is therefore forbidden. Instead, use the 'GET PERAS' event. Except for the PERNR-PERNR component, all other components of the PERNR structure are no longer filled and have initial values. This kind of programming (with the exception of PERNR-

PERNR) is therefore not permitted.

In addition to the 'GET PERAS' event, you can also use the 'GET PERSON' and 'GET GROUP' events. To be able to use these events, you must declare them using the NODES statement ('NODES PERSON', 'NODES GROUP', or 'NODES PERAS').

Explanation of Terms

If the 'GET PERSON' and 'GET GROUP' events and the 'AS PERSON TABLE' addition for the INFOTYPES statement are not used, the report indicates that it does not require the functionality for evaluating Concurrent Employment. In this case, the report runs in a PNP-compatible session. This is referred to as **PNP mode** in the following documentation. On the other hand, if the report uses the functionality for evaluating Concurrent Employment we refer to **CE mode**.

Features

Process of an Evaluation

The PNPCE selection screen offers you as standard a range of functions that you can use to restrict the personnel number and person selection. These are discussed in more detail in the following sections. The process is initially as follows regardless of whether the report runs in CE or PNP mode. All available functions and selection conditions leads to the selection of personnel numbers. If you use the sorting function, this set of personnel numbers is then sorted according to the sort criteria you selected. In PNP mode, the GET PERAS event is triggered as a result for each personnel number.

In CE mode, the persons belonging to the personnel numbers are determined first for all personnel numbers selected. The GET PERSON event is then triggered for each person. The person ID is specified in the OBJID component of the PERSON structure. PERNR_NUM contains the total number of personnel assignments (= personnel numbers) that this person has and the ALL_PERNRS table, which contains a list of these personnel numbers regardless of whether they were actually selected or not. The SELECTED flag is set to X for the personnel numbers selected. The flag is initial for all personnel numbers that are not selected. The PROCESS flag specifies whether the personnel number should be processed in the rest of the process. This flag is set to X by default for the personnel numbers selected. However, the report can set or delete this flag at the GET PERSON event for all personnel numbers. In this way, report and logical database communicate with each other which enables the report to control the rest of the process.

In the next step, the logical database groups all personnel numbers of a person that are to be processed (that is, all personnel numbers that have the PROCESS flag set). The report can control the type of grouping using the PNPCE_GROUPING_FROM_PAYROLL flag (normal or payroll grouping) and using the PNPGRSN (grouping reason) and PNPGPVAL (grouping value) parameters of the selection screen. The GET GROUP event is triggered for each group of personnel numbers determined. The GROUPING_REASON and GROUPING_VALUE components contain the grouping reason and grouping value of this group. The number of personnel numbers that belong to this group and that are processed subsequently is in PERNR_NUM. The included ALL_PERNR table contains a list of these personnel numbers with additional information. The SELECTED flag specifies whether the current personnel number was originally selected (flag is set) or was marked by the report as to be processed. GROUPING_BEGDA and GROUPING_ENDDA contain the validity period that the personnel number has for this grouping. The NO_AUTHORITY flag is set if there is insufficient authorization for a personnel number. This personnel number is not processed further. The SORT component defines a standard sort order for the personnel numbers of a group. The report can change this by overwriting the values. In this way, report and logical database communicate with each other, which controls the further processing sequence of the personnel numbers.

The GET PERAS event is then triggered for all personnel numbers of the group (with the exception of the personnel numbers for which no authorization exists) in the sequence defined by the SORT component (see above). The SELECTED, GROUPING_BEGDA, and GROUPING_ENDDA components have the same meaning here as with the GET GROUP event. The PROCESSED_BEFORE flag specifies whether the personnel number has already been processed once before (it is possible that the personnel number belongs to several

groupings and has been therefore been processed several times).

Sort Order

You can sort the list of selected personnel numbers using the Sort function in the application toolbar. You can choose to include up to seven fields from infotype 0001 for the sort. Since several data records can exist for infotype 0001 for a personnel number, you also need to specify for period evaluations (not the case for key date evaluations) whether the sort should take place according to the values of the last or of the first data record in the person selection period.

In PNP mode, the sorted sequence determines exactly the sequence in which the GET PERAS event is called. In CE mode, the sort determines the sequence in which the GET PERSON event is called. The list of persons is created based on the (sorted) sequence of personnel numbers. If only one person exist for each selected personnel number, the sequence of persons corresponds exactly to the sequence of personnel numbers. However, if several selected personnel numbers lead to the same person, only the first personnel number determines the sort sequence of persons. All other personnel numbers only determine the sequence in which the GET PERAS event is subsequently called. Provided that the report does not require the personnel numbers to be resorted by manipulating the SORT component at the GET GROUP event (see above), the GET PERAS event is called for the personnel numbers of a person in the sequence in which the personnel numbers were (srcinally)

sorted.

Retrieving Infotype Data Records

As well as triggering the GET PERSON, GET GROUP, and GET PERAS events, the logical database also provides the data records of the infotypes that are requested using the INFOTYPES statement. In the report, you must specify the INFOTYPES statements where the variable declarations are made. You should do this in any case before the first code is entered.

In principle, there are three types of INFOTYPES statements:

INFOTYPES nnnn

The nnnn infotype is provided with the data records of the current personnel number at the GET PERAS event. Only the data records that are in the evaluation period specified in the selection screen are provided (this is different to PNP, which provides all data records by default). Alternatively, the report can specify which data records are to be provided using the RP_SET_DATA_INTERVAL, RP_SET_DATA_INTERVAL_INFITY, and RP_SET_DATA_INTERVAL_ALL macros.

INFOTYPES nnnn AS PERSON TABLE

The nnnn infotype is provided at the GET GROUP event with the data records of all personnel numbers that are in the included ALL_PERNRS table (of the GROUP structure) and for which authorization exists (NO_AUTHORITY flag is not set). Only the data records that are in the evaluation period specified in the selection screen are provided. Alternatively, the report can specify which data records are to be provided using the RP_SET_DATA_INTERVAL, RP_SET_DATA_INTERVAL_INFITY, and RP_SET_DATA_INTERVAL_ALL macros.

INFOTYPES nnnn AS PERSON TABLE MODE P

The nnnn infotype is provided at the GET PERSON event with the data records of all personnel numbers that are in the included ALL_PERNRS table (of the PERSON structure). No authorization check is performed and all existing data records are provided independent of how the evaluation period is defined in the selection screen. The use of the RP_SET_DATA_INTERVAL, RP_SET_DATA_INTERVAL_INFITY, and RP_SET_DATA_INTERVAL_AL macros also has no influence here.

Selection Options

You can use all the functions and selection options in the selection screen (initially) to select personnel numbers regardless of whether the report is running in PNP or CE mode. Only in CE mode, the persons belonging to these personnel numbers are then determined. The functions that PNPCE provides to restrict the selection are described in the following. The environment in which these functions are actually used depends on the report and its report category. You can assign a report category to a report in maintenance of report attributes (SE38, Attributes, Change button -> HR report category button). The customer can override this assignment. To do so, perform the [Assign Report Categories](#) Customizing activity under 'Personnel Management' -> 'Human Resources Information System' -> 'Reporting' -> 'Adjusting the Standard Selection Screen'. Follow the same path to define and change report categories in the [Create Report Categories](#) Customizing activity. Since the PNP logical database also uses the concept of report categories, ensure that you assign only one report category that is created specially for the PNPCE database to a PNPCE report.

Selection Fields of the 0000 and 0001 Infotypes

You can use all the standard fields of the 0000 and 0001 infotypes for selection. You can also use additional selection fields that are the concatenation of two or more of these infotype fields. If possible, do not use these concatenated fields because they do not play a significant role in the selection and can lead to long runtimes in certain circumstances. You can show and hide the required selection fields using the Selection Fields function in the application toolbar. The report category defines a preselection of fields that should be available.

Dynamic Selections

The dynamic selections enable you to select according to any infotype fields and, in particular, according to customer-specific infotype fields. You can show and hide the dynamic selections using the Dynamic Selections function in the application toolbar. The report category controls whether this appears as a dialog box or inplace, that is whether the dynamic selections are supported at all. The basis for the dynamic selections is a selection view that defines which infotypes and which fields can be used for selection. You can define the selection view in the ABAP Workbench. You must choose For any table as the type of selection view (the For logical database type is not permitted although you may have presumed differently at first). The report category is used to control which selection view is used for the dynamic selections. If you use the dynamic selections, the Restrict by OrgStructure, Search Help, and Selection ID functions are not available.

Restrict by OrgStructure

You can also select personnel numbers by their position in the organizational structure. To do

so, you use the OrgStructure function in the application toolbar. This button displays the organizational structure. Here you can select the organizational units to which the personnel numbers to be selected should belong. It is insignificant if the personnel numbers are assigned to the selected organizational unit directly or to one of its subordinate organizational units. If you restrict the selection by organizational structure, the Dynamic Selections, Search Help, and Selection ID functions are not available.

Search Help

You can use the included search helps of the PREM collective search help by clicking Search Help function in the application toolbar. You can also add customer-specific search helps here. For a description of how to do this, see the Customizing for Personnel Management -> Personnel Administration -> Basic Settings -> [Maintain Search Helps](#). If you use a search help, the Dynamic Selections, Restrict by OrgStructure, and Selection ID functions are not available.

Selection ID

You can also restrict the number of personnel numbers to be selected using a predefined selection method called a Selection ID. For information on how to use and create selection IDs, see the [Define Selection IDs](#) Customizing activity under 'Personnel Management' -> 'Human Resources Information System' -> [Define Selection IDs](#). How you [Specify Groupings](#) of selection IDs is also described here. The selection ID whose grouping is stored in the report category are available to you for selection on the PNPCE selection screen. When you select a selection ID, it is always performed. This happens either explicitly when you press the button (behind the selected selection ID), or implicitly when output starts (F8). If you use a selection ID, the Dynamic Selections, Restrict by OrgStructure, and Search Help functions are not available.

Evaluation Period

The PNPCE (and the PNP) differentiates between the *data selection period* and the *person selection period*. Both these periods are summarized in the term *evaluation period*. Whereas the person selection period affects the selection of personnel numbers, the data selection period controls the retrieval of data requested by the INFOTYPES statement. You can configure both separately on the selection screen by selecting an appropriate entry in each list box. Alternatively, you can set up both selection periods at the same time using a common list box. You can control which entries are in the list boxes (that is which evaluation intervals are supported) using the report category. The person selection period you have set up is taken into consideration when the personnel numbers are selected. Only the personnel numbers are selected that fulfill the selection conditions on at least one (key) date in the specified person selection period. All data records of the requested infotypes that are valid on at least one (key) date in the specified data selection period are retrieved by default for these personnel numbers. You can set up a different procedure using the RP_SET_DATA_INTERVAL, RP_SET_DATA_INTERVAL_INFITY, and RP_SET_DATA_INTERVAL_ALL macros. Retrieving data records for infotypes that were defined by the AS PERSON TABLE MODE P addition is an exception. In this case, all data records are retrieved independent of the data selection period.

The payroll period should be considered as a special feature for the evaluation period. You can select either the current payroll period or another payroll period. You must enter the

1. Dynamic Selections
2. Restrict by OrgStructure
3. Search Help
4. Selection ID
5. Explicit Specification or Personnel Numbers in PNPINDEX
6. Explicit Specification or Persons in PNPPERID

The personnel number set found this way is always restricted further by the selection conditions specified in the 0000 and 0001 infotypes.

Example

PNP Mode (without functions for evaluating concurrent employment)

```

TABLES: PERNR.
NODES: PERAS.
INFOTYPES: 0006 NAME P0006.
GET PERAS.
* table P0006 is filled with infotype 0006 data of PERNR
* stored in PERAS-PERNR
  WRITE :/ PERAS-PERNR.
  ...

```

CE Mode (with function for evaluating concurrent employment)

```

TABLES: PERNR.
NODES: PERSON, GROUP, PERAS.
INFOTYPES: 0001 NAME ALL_0001 AS PERSON TABLE MODE P.
INFOTYPES: 0001 NAME PP0001 AS PERSON TABLE.
INFOTYPES: 0006 NAME P0006.
GET PERSON.
* table ALL_0001 is filled with infotype 0001 data of all PERNRs
* stored in PERSON-ALL_PERNRS without authority check !!!
  WRITE :/ PERSON-OBJID.
  ...
GET GROUP.
* table P0001 is filled with infotype 0001 data of all PERNRs
* stored in GROUP-ALL_PERNRS
  WRITE :/ GROUP-GROUPING_REASON, GROUP-GROUPING_VALUE.

GET PERAS.
* table P0006 is filled with infotype 0006 data of PERNR
* stored in PERAS-PERNR
  WRITE :/ PERAS-PERNR.
  ...

```