Evaluating the Payroll Results Using Infotypes or the Logical Database

Release 4.6C

SAP ™

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Icons

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⚠	Caution
📄	Example
➡	Note
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SYN	Syntax
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Evaluating the Payroll Results Using Infotypes or the Logical Database

Use

The following options are available in the SAP system for evaluating the payroll results.

- The payroll infotypes [Page 9] and the InfoSet Query [Ext.]

    For detailed information on the InfoSet Query, see the SAP Library under *Human Resources → Reporting in Human Resources Management → HR Reporting Tools → SAP Query (BC-ERV-Que) → InfoSet Query.*

- Logical Database [Ext.]

- Standard reports

    You can evaluate the payroll results in direct access with the standard reports.

    – Remuneration statement [Ext.]

    – Payroll journal [Ext.]

    – Payroll account [Ext.]

    – Wage type reporter [Ext.]

    For detailed information on the standard reports, see the SAP Library under *Payroll → Other Countries → Subsequent Activities.*

- *Business Warehouse*

    You can also evaluate the payroll results in the *SAP Business Warehouse* environment. For detailed information on this, see the Business Warehouse in the SAP Library.

Evaluating the Payroll Results Using Infotypes or the Logical Database

Ways of Evaluating the Payroll Results
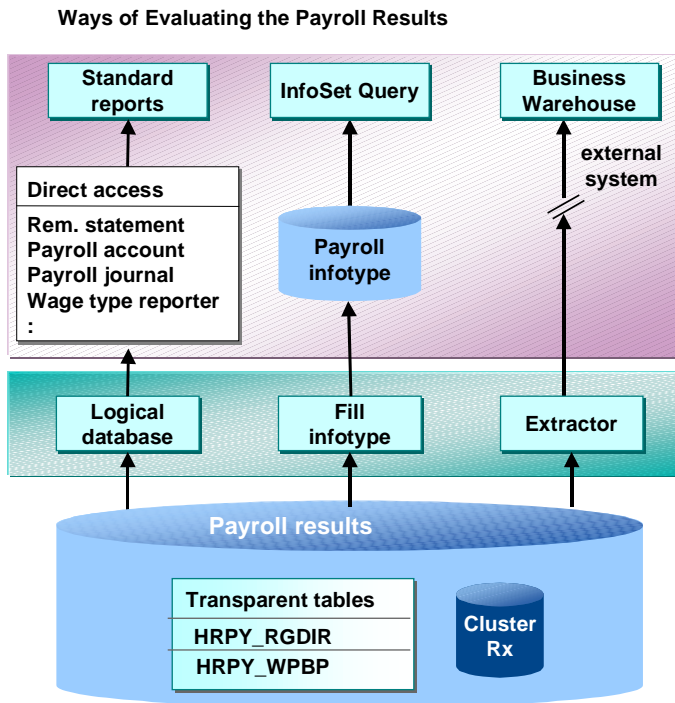
Scope of Function

Inform yourself of the evaluation options before you evaluate the payroll results.

Comparison of the Evaluation Options using Payroll Infotypes or using the Logical Database PNP with the Enhancements for the Payroll Results

General criteria for the evaluation	Payroll infotypes for the evaluation with the InfoSet Query	Enhancement of the logical database PNP for Payroll for direct evaluation with reports
Evaluation path	If you want to evaluate the payroll results using the InfoSet Query [Ext.], use the relevant payroll infotype (for example, *Monthly Cumulation* (0458)). You use the payroll infotype to provide the InfoSet Query with the payroll results for evaluation.	If you want to use **reports** to evaluate the payroll results, you use the logical database for Payroll. The reports call the **logical database** to evaluate the payroll results. The InfoSet Query does not use the logical database for Payroll to evaluate the payroll results.

Evaluating the Payroll Results Using Infotypes or the Logical Database

Storing the data	The SAP system stores the data in the transparent tables for the payroll infotypes. Special wage types called evaluation wage types [Ext.] are available for this purpose.	The payroll driver stores the data for the logical database redundantly, in transparent form, in the following tables: • *Directory information* from the CU cluster is stored in the transparent table HRPY_RGDIR. The cluster remains in the system. • Data for the *Work Center/Basic Pay* (Table WPBP) from the RX cluster is stored in the transparent table HRPY_WPBP. The RX cluster remains in the system.
Calling the data	The SAP system only calls the **current** payroll results. You can select the evaluation data with the help of wage types.	The SAP system calls **all** the payroll results from the evaluation period for processing.
Data Selection	You get a quick selection of the payroll results with the help of the wage types that are provided in the payroll infotype.	You get a high-performance selection of the payroll results with the help of selected fields from the *Period* group box and the organizational fields from the *Selections* group box (for example, personnel number, payroll area or company code). Example in report: EXAMPLE_PNP_GET_PAYROLL [Page 25]
Programming	You should not change the programming of the payroll infotypes and use (read) them in other programs.	You can use the existing reports to evaluate or write evaluation reports using program examples [Page 25]
Validity for the countries	As well as payroll infotypes [Page 9], that are valid internationally (for example, payroll results: *Periodical Values* (0402), *Monthly Cumulation* (0458) there are payroll infotypes that are valid for one country.	In the SAP system, there is one logical database for all countries. Country-specific features are provided by standardizing the node **PAYROLL** (for example, NODES: **PAYROLL TYPE PAYUS_RESULT**)

Evaluating the Payroll Results Using Infotypes or the Logical Database

Prerequisites

Description	Payroll infotypes	Enhancement of the PNP logical database for Payroll
Customizing	In Customizing for Personnel Management under Human Resources Information System → Payroll Results [Ext.] you have: • defined the evaluation wage types • assigned the wage types • set up the payroll infotype • assigned the payroll infotype to Payroll	In the attributes for the evaluation report, you have specified the following: • Logical database: **PNP** • Selection screen version: **900** selection screen for the payroll results • HR report class for *Payroll* (for example, the standard value **PY_DEF**) and the function *Payroll report class* selected.

Infotypes for Evaluating Payroll Results

Use

In addition to master data, applicant data, and personnel planning data, you can also evaluate payroll results using a query and InfoSet query.

A number of predefined infotypes are available for the evaluation. The wage types required for the evaluation are entered in these infotypes:

Infotype	Meaning
0402	Payroll Results: Period Values
0403	Payroll Results: Period Values (not required at present)
0458	Monthly Cumulation of Payroll Results
0459	Quarterly Cumulation of Payroll Results
0460	Annual Cumulation of Payroll Results

You can either activate these predefined infotypes or create your own infotypes using the same structures. You can enhance these infotypes by using additional wage types and then activating the infotypes. This makes the necessary data, from the payroll results, available on the PNP logical database.

If an error occurs when filling the payroll infotype, refer to the note *Problems when Filling the Payroll Infotype* (note number 0125921).

Furthermore, we recommend that you create your own payroll infotypes in the customer name range 9* and do not modify the payroll infotypes *Payroll Results: Period Values (0402 or 0403).*

USA: Infotypes for Tax Reporting

The pre-defined infotypes 0446 and 0457 are also used for tax reporting. These infotypes have been created specifically for the USA. For more information, see US Tax Payroll Infotypes (0446 -0457) [Ext.].

Prerequisites

You have performed the following activities before you set up the evaluation of payroll results using a query or InfoSet Query:

1. In Customizing for *Personnel Management* under *Human Resources Information System* → *Payroll Results* → Set Up Payroll Infotypes [Ext.], you have activated the payroll infotypes you require. You can create new payroll infotypes based on pre-defined payroll infotypes and then enhance these to meet your requirements.

2. The infotype was filled out with the information from a payroll result. You have two options:

   – As long as Customizing has been set up accordingly, data is automatically transferred to the infotype in each payroll run. You do this in Customizing for *Personnel Management*

Infotypes for Evaluating Payroll Results

> under *Human Resources Information System → Payroll Results →* Set Up Assignment for Payroll [Ext.].

– You can enter data in the infotype without a payroll run using report RPABRI00.

Activities

For information on evaluations using a query or InfoSet query, see BC - SAP Query [Ext.]. For information on evaluations in Human Resources, see Maintaining Queries in the HR Application [Ext.].

Payroll Results Infotypes: Period Values (0402 and 0403)

Definition

The *Payroll Results: Period Values* infotype (0402) contains information from the payroll results of the regular payroll run. Infotype 0403 is identical and is currently not required.

The start and end dates for the infotype correspond to the payroll period.

Structure

You define the structure of the infotype in Customizing for *Personnel Management* under Payroll Results [Ext.].

You cannot maintain the infotype on-line. You can maintain the infotype using one of the following methods:

- The data is automatically updated when the payroll run has been completed successfully, however, this must be set up accordingly in Customizing for *Personnel Management* under *Human Resources Information System → Payroll Results →* Set Up Assignment for Payroll [Ext.]. We recommend that you use this procedure as the data in the payroll infotype is automatically updated by the system (also in the case of retroactive accounting).

- You can update the data at any time using report RPABRI00. We recommend that you use this procedure if existing payroll results should be evaluated.

Using this infotype as a basis, you can evaluate the results of a regular payroll run using the query and the InfoSet Query.

Monthly Cumulations (Infotype 0458)

Definition

In the standard system, the *Monthly Cumulation of Payroll Results* infotype (0458) contains general information from the payroll results and <u>cumulation wage types [Ext.]</u> referring to one month. This can be useful if the periods for your payroll run are weekly and not monthly, or if payroll is run using a different frequency.

The start and end dates for the infotype correspond to the cumulation period. If your employee, for example, leaves the company in the middle of a cumulation period, you can still access the cumulated values.

Structure

You define the structure of the infotype in Customizing for *Personnel Management* under *Payroll Results.*

You cannot maintain the infotype on-line. You can maintain the infotype using one of the following methods:

- The data is automatically updated when the payroll run has been completed successfully, however, this must be set up accordingly in Customizing for *Personnel Management* under *Human Resources Information System → Payroll Results →* <u>Set Up Assignment for Payroll [Ext.]</u>*.*

- You can update the data at any time using report RPABRI00.

Using this infotype as a basis, you can evaluate payroll results using the query and the InfoSet Query.

Quarterly Cumulations (Infotype 0459)

Definition

In the standard system, the *Quarterly Cumulation of Payroll Results* infotype (0459) contains general information from the payroll results, as well as cumulation wage types [Ext.] that refer to quarterly values.

The start and end dates for the infotype correspond to the cumulation period. If your employee, for example, leaves the company in the middle of a cumulation period, you can still access the cumulated values.

Structure

You define the structure of the infotype in Customizing for *Personnel Management* under *Payroll Results.*

You cannot maintain the infotype on-line. You can maintain the infotype using one of the following methods:

- The data is automatically updated when the payroll run has been completed successfully, however, this must be set up accordingly in Customizing for *Personnel Management* under *Human Resources Information System → Payroll Results →* Set Up Assignment for Payroll [Ext.].

- You can update the data at any time using report RPABRI00.

Using this infotype as a basis, you can evaluate payroll results using the query and the InfoSet Query.

Annual Cumulations (Infotype 0460)

Definition

In the standard system, the infotype *Annual Cumulation of Payroll Results* (0460) contains general information from the payroll results as well as cumulation wage types [Ext.] for annual values.

The start and end dates for the infotype correspond to the cumulation period. If your employee, for example, leaves the company in the middle of a cumulation period, you can still access the cumulated values.

Structure

You define the structure of the infotype in Customizing for *Personnel Management* under *Payroll Results.*

You cannot maintain the infotype on-line. You can maintain the infotype using one of the following methods:

- The data is automatically updated when the payroll run has been completed successfully, however, this must be set up accordingly in Customizing for *Personnel Management* under *Human Resources Information System* → *Payroll Results* → Set Up Assignment for Payroll [Ext.]*.

- You can update the data at any time using report RPABRI00.

Using this infotype as a basis, you can evaluate payroll results using the query and the InfoSet Query.

Using the Logical Database for Payroll

Use

From Release 4.6A, the evaluation of payroll results is supported by a logical database that is integrated in the logical database PNP for HR master data [Ext.]. This tool enables you to create programs for the evaluation of payroll results both simply and quickly.

Mode of Operation of the Logical Database PNP with the Enhancements for Evaluation of the Payroll Results
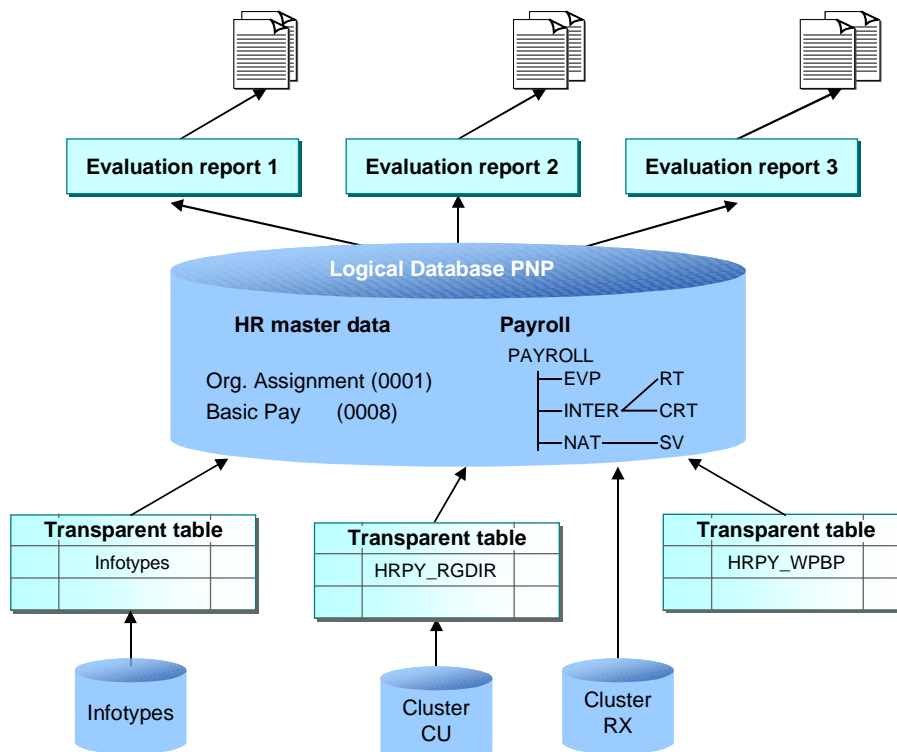
Using the logical database for payroll results has the following advantages for the user:

*   You can access the payroll results faster and more easily.

*   It is a simple and standardized way of evaluating the payroll results.

*   Evaluation reports use this standardized interface and have a standard appearance.

*   The performance of the evaluation reports is improved by using transparent tables for data selection.

*   The number of coding lines in the evaluation programs (reports) is reduced by up to 60 percent.

*   An evaluation report can be created in less time.

*   The logical database supports use of the HR process workbench [Ext.]. This improves integration in the whole payroll process.

Using the Logical Database for Payroll

- The selection screen can be customized. To do this, you use the new report categories [Page 30]

- Different sort variants (all the fields for WPBP and RGDIR can currently be sorted)

- It is not necessary to customize the payroll infotypes.

Use the logical database for payroll for new reports that evaluate the payroll results.

Scope of Function

The most important functions are:

- Data Retrieval

     The logical database [Ext.] consists of special ABAP programs that also provide the programs in *Payroll* with the evaluation data. All the data in a payroll record is provided in the subobjects for a complex structure [Page 20] at a selected time. To evaluate the payroll results, you can use reports from the standard system or create your own reports.

- Data Selection

     The logical database provides a particular view of the database tables for *Personnel Administration* (PA-PA) or *Payroll* (PY) and enables you to select and evaluate payroll results according to particular criteria.

     Employees can now be selected on the selection screen of the evaluation report according to organizational criteria, for example, you can select all employees in a payroll area, however, the selection is made using exclusively the payroll results.

- Authorization

     The system checks whether the user who started the evaluation has the correct authorization for this evaluation. The authorization concept corresponds to the concept of the previous PNP report.

Technical Realization of the Evaluation Options for Payroll Results

InfoSet Query

Payroll infotype

Report

Attribute PNP 900

Fill automatically or using RPABRI00

Business Warehouse

External system

LDB PNP payroll results

PYXX - READ - PAYROLL

RP - IMP - XXX

PYXX - WRITER - PAYROLL

Transparent tables

HRPY_RGDIR

HRPY_WPBP

Payroll results
CLUSTER RX, RD,...

Extractor

No longer as of Release 5.0

Standard report (EDT, ...)
„ALT"

Attribute PNP' '
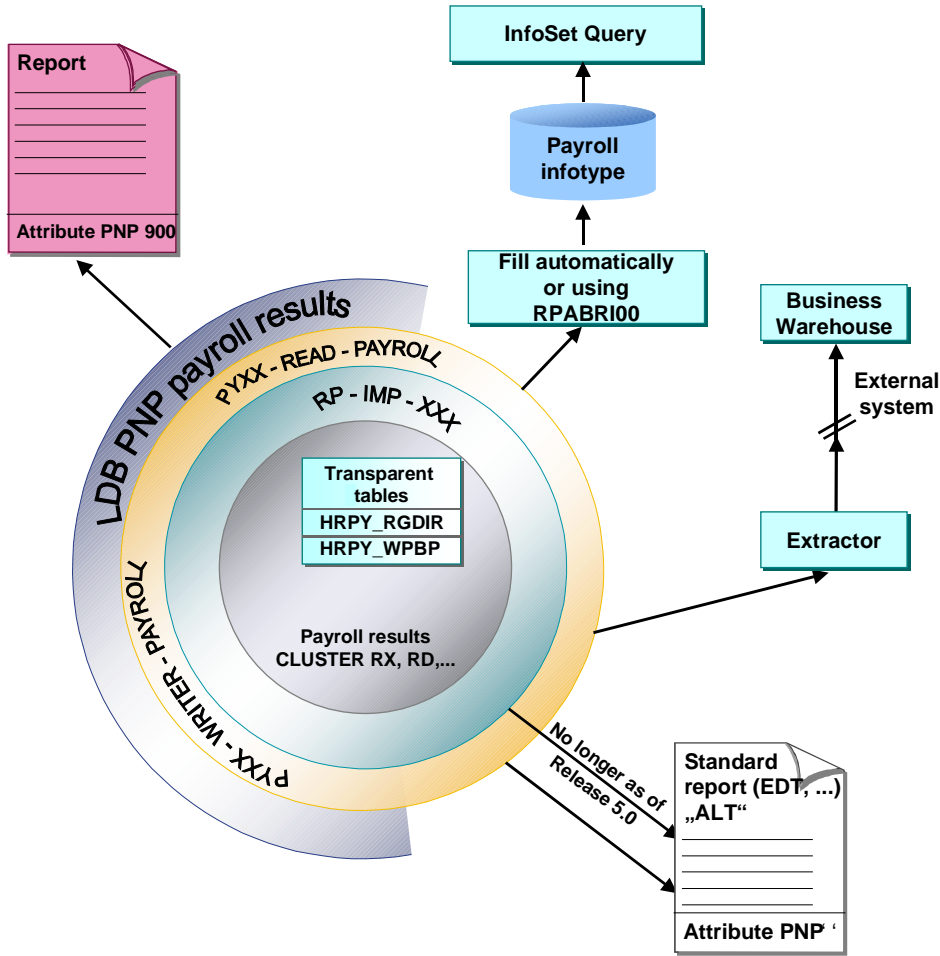
Comparison of the Logical Database for HR Master Data and the Logical Database for Payroll

Technical Criteria or Enhancements	Logical Database for HR Master Data (PNP)	Logical Database for Payroll (PNP with Screen 900)

Using the Logical Database for Payroll

Time of data retrieval	There is only one date available for data retrieval: • At the time of GET PERNR, all infotype records are placed in an internal table for one personnel number	Several data retrieval events exist: • At the time of GET PERNR, all the infotype records are made available in an internal table (infotype table) for one personnel number • At the time of GET PAYROLL, the payroll results for a personnel number are made available in a complex structure • If all GET PAYROLL events have run for a personnel number, the event GET PERNR LATE is triggered
Retrieval of payroll data for the evaluation programs	Each internal table and field string (for example, RT, BT, SV, and so on) must be sorted and processed individually	A complex structure containing all tables (WPBP, SV, BT, and so on) for each country
Selection	• According to infotypes • Extends to the HR master data	• According to payroll results • Extends to the HR master data and payroll results
Evaluation report	• Uses import macros (for example, RP-IMP-C2-RX) • Sorting required	• Uses complex structures [Page 20] • You can use all fields in the internal tables HRPY_RGDIR and HRPY_WPBP and sort them as required • Selection of required sort sequence using the *Sort* function in the report

| Modifying the selection screen | In Customizing for Personnel Management under *Human Resources Information System → Reporting* using:

Report categories (selection criteria [Ext.]) | In Customizing (when creating a report) using:

Report categories

The fields on the selection screen for the evaluation report are controlled using the new report categories. The main procedure for customizing the selection screen corresponds to the familiar procedure for customizing the PNP report categories. |

Structure of Logical Database for Payroll

The logical database for payroll transfers the payroll results to the evaluation reports in a complex structure. This structure contains an international and a national node that are subordinate to the root nodes:

- International node

    The international node contains international (non-country-dependent) tables (for example, RT, CRT). The appropriate international tables are filled at runtime and retrieved using the complex structures.

- National node

    The national node contains the national tables (for example, SV) The corresponding national tables are determined and filled at runtime using the type assignment.

Root nodes　　　Nodes　　　Tables

```
 PAYROLL
    │
    ├─── EVP ──── Period information
    │
    ├─── INTER ◁── RT
    │              CRT
    │              ...
    │
    └─── NAT   ◁── SV
                   SCRT
                   ...
```
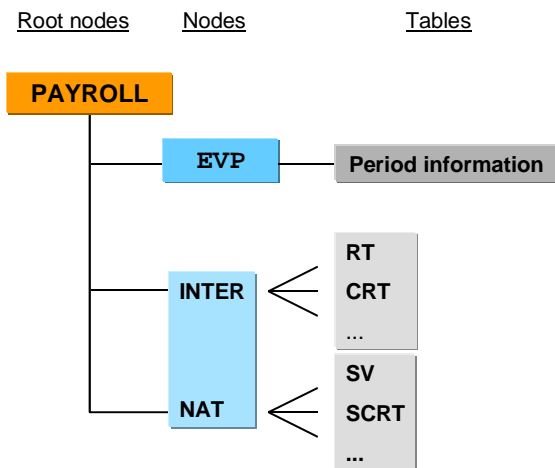
Conversion of Evaluation Reports

How Do You Convert an Existing Evaluation Report to the Logical Database for Payroll?

In Release 4.6C, we recommend that you first convert any reports (standard reports and customer reports) that are not used by any other report. You should not convert reports that are called using function modules or other reports (for example, the remuneration statement or the payroll account) in this release.

> See the release note *Using the Logical Database for Payroll* for Release 4.6C.

To convert a report to the logical database for payroll, proceed as follows:

- Enter the following in the report attributes:

    - Logical database: **PNP**

    - Selection screen version: **900** selection screen for the payroll results

    - HR report category for payroll: **PY_DEF** of a customer report category

        Select *Payroll report category.*

- Change the following in the coding:

    - The evaluation report is assigned to a country when the coding line **NODES: PAYROLL TYPE PAY99_RESULT** is inserted.

    - Switch the **RP-IMP-C2-xx** macro to the event **GET PAYROLL.** We recommend that you no longer use the macro **RP-IMP-C2-xx**.
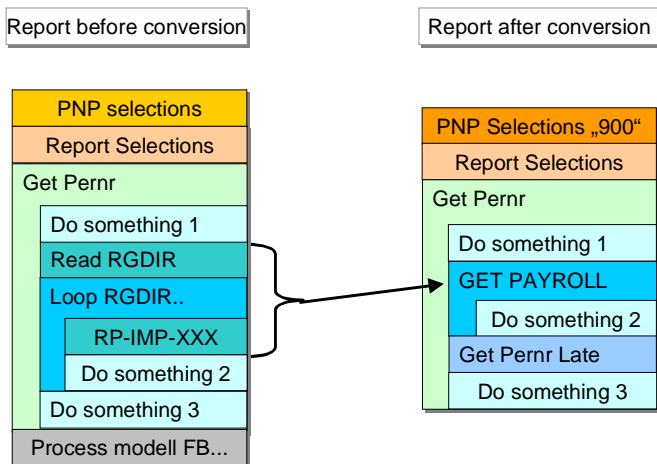
> SAP provides the report EXAMPLE_PNP_GET_PAYROLL [Page 25] as an example.

Conversion of Evaluation Reports

To convert old evaluation reports, use the utility macros [Page 26], which are contained in the standard system, and one of the listed variants.

- If you only want to make minor changes to the coding of the report, we recommend that you use **variant A** for the conversion. With this variant, the conversion effort required is minimal.

    - Example: Old coding [Page 27]

    - Example: Variant A – New coding [Page 28]

- We recommend that you use **variant B** for the conversion if the report is not very large and you want it to be compatible for further developments.

    Switch macro **RP-IMP-C2-xx** to the event **GET PAYROLL.**

    - Example: Old coding [Page 27]

    - Example: Variant B – New coding [Page 29]

See also:

ABAP Coding: Read International Payroll Results

The system reads the international part of the payroll results for all clusters. The **GET PAYROLL** event is triggered for all personnel numbers and not just for the international country grouping (99).

```
Segment from coding


NODES: payroll TYPE pay99_result.

DATA:  wa LIKE LINE OF .  . payroll-inter-rt.

GET PERNR.

...

GET PAYROLL.
  LOOP AT payroll-inter-rt
          INTO wa.
    WRITE:  wa-lgart.
  ENDLOOP.
```

ABAP Coding: Read National Payroll Results

The system reads country-specific payroll results (for example, for Germany). The **GET PAYROLL** event is only triggered for personnel numbers for the specified country.

```
Segment from coding


REPORT EXAMPLE_ ...

NODES: payroll TYPE payde_result.

...

GET PERNR.

...

GET PAYROLL.
  LOOP AT payroll-inter-rt INTO wa1.
    WRITE:  wa1-lgart.
  ENDLOOP.
  LOOP AT payroll-nat-sv INTO wa2.
    WRITE:  wa2-rvnum.
  ENDLOOP.
```

ABAP Coding: Report EXAMPLE_PNP_GET_PAYROLL for Evaluation of Payroll Results

This report uses the logical database PNP to evaluate the payroll results.

Example: Short version of report `EXAMPLE_PNP_GET_PAYROLL`

REPORT EXAMPLE_PNP_GET_PAYROLL.

`* You find an extended version`

* of this report in your R/3 system !

TABLES: pernr, pyorgscreen, pytimescreen.

NODES: payroll TYPE pay99_result.

Data: g_result_counter type i.

GET pernr.

WRITE: / 'Currently working on:', pernr-pernr.

GET pernr LATE.

`WRITE: / 'Found', g_result_counter,`

    'results for #', pernr-pernr.

ULINE.

GET payroll.

g_result_counter = g_result_counter + 1.

WRITE: / 'Seq No. = ',   payroll-evp-seqnr,

    'In period =', payroll-inter-versc-inper,

    `'In period =', payroll-inter-versc-inper,`

    'Pay date =', payroll-inter-versc-paydt.

Utility Macros for Report Conversion

Segment from Coding

```
REPORT

INCLUDE h99paytransmac.

NODES: payroll TYPE payDE_result.

...

GET PERNR.

...

GET PAYROLL.

Copytodata payroll.

LOOP AT rt INTO wa.
    WRITE:  wa-lgart.
ENDLOOP.
...
```

```
RT[] = &1-INTER-RT.
CRT[] = &1-INTER-CRT.
BT[] = &1-INTER-BT.
C0[] = &1-INTER-C0.
C1[] = &1-INTER-C1.
...
```

The SAP system contains generated macros for easy conversion of old reports. The coding for this report is based on the individual payroll tables (for example, RT, CRT).

- For the O tables (for example, ORT), use `copytodata_o`.

- To transfer the contents of the single tables (for example, RT) to the complex structure, use `copytostruc(_o)`.

- The macro `copystruc_o` works in the same way as `copystruc` but for O tables.

Example – Old Coding

```
Segment from coding


INCLUDE: RPC2RX00.

INCLUDE: RPC2RXX0.

INCLUDE: RPPPXD00.

DATA: BEGIN OF COMMON PART BUFFER.

   INCLUDE RPPPXD10.

DATA: END OF COMMON PART BUFFER.

INCLUDE: RPPPXM00.

...

START-OF-SELECTION.

GET PERNR.

RP-IMP-C2-RX.
LOOP AT RT.
...
```

Example: Variant A: New Coding

```
Segment from coding


INCLUDE: RPC2RX00.

INCLUDE: RPC2RXX0.

NODES: payroll type pay99_result.

...

START-OF-SELECTION.

GET PERNR.

GET PAYROLL.

COPYTODATA PAYROLL.

LOOP AT RT.
...
```

Advantage

Parts of the coding that refer to the single tables (for example, RT, CRT, and so on) need not be changed since the single tables are filled by the macro **copytodate.**

Example: Variant B: New Coding

```
Segment from coding

NODES: PAYROLL TYPE PAY99_RESULT.

DATA: RT_HEADER TYPE LINE OF HRPAY99_RT.

...

START-OF-SELECTION.

...

GET PERNR.

GET PAYROLL.

LOOP AT PAYROLL-INTER-RT INTO RT_HEADER.

...
```

Advantage

The use of the complex structure simplifies the layout of the report. This variant does not require the macros. Instead, it uses the new complex structure **PAYROLL**. You do not need to use an INCLUDE as in the Example – Variant A: New Coding [Page 28].

Disadvantage

You must replace the link to the single tables (for example, RT, CRT) by a link to the complex structure.

Report Category

Definition

The report category specifies which fields are displayed on the selection screens of evaluation reports in *Human Resources.*

Use

Report Categories for HR Master Data

The report categories for *HR Master Data* define which master data fields are displayed on the standard selection screens for standard evaluation reports. Report categories are already assigned to the standard reports.

In Customizing for *Personnel Management*, you can create report categories [Ext.] and assign a report category to an evaluation report [Ext.].

⚠

> Only change the report categories for the standard SAP reports, if the selection screen for the SAP standard system does not meet your requirements and you are aware of the effect this will have on the selection screen.

Report Categories for Payroll

The report categories for the evaluation of payroll results define which master data fields are displayed on the standard selection screens for evaluation reports.

If you want to create a new evaluation report to evaluate the payroll results using the logical database for payroll, use either report category **PY_DEF**, or create your own report category and assign it to the new report.

See also:

Creating a Report and Report Category [Page 31]

Creating a Report and Report Category

Use

You want to create a new report to evaluate the payroll results.

Prerequisites

You are in the *ABAP Editor* in the *Change Program Attributes* `<name report>` screen.

Procedure

1. Enter the required values in the fields you are already familiar with.

2. In the *Logical database* field, enter `PNP` and in the *Selection screen version* field, enter `900` for the logical database for payroll.

3. Choose *HR report categories.*

    The *Report Category Assignment* dialog box appears.

4. Select *Payroll results (Cluster)* and enter the name of the new report category.

5. Choose 🗋 *Create report category.*

    The *View Change "Time Selection Definition" Overview:* screen appears.

6. To develop the report further, define the time and organizational selections.

7. Save your entries.

Result

You can use the report to evaluate payroll results.