1705 - Getting the Most out of SAP Reporting Methodology

Martin Gillet - SAP Mentor - SAP HCM Independent (Belgium)
• Obtain guidelines for using SAP Standard reporting to its full capability.

• Explore reporting capabilities from your SAP ERP Human Capital Management (SAP ERP HCM) system, from standard reporting, to organizational management reporting, to SAP queries and ad-hoc queries

• Get tips and tricks to optimize the use and the delivery of all types of reports
• Learn to extend SAP Standard reporting by using tips and tricks provided (and supported) by SAP.
• Learn how to add payroll and time management infotypes into standard reporting thus decreasing needs for specific reporting or developments.
- Optimize the use of standard configuration and customizing.
- Boost reporting delivery by using standard options and alternatives to decrease and/or stop specific reporting needs.
Agenda

- Introduction
- Accessing SAP ERP HCM reports
- Configuring the reports
- Adding Payroll and Time Management infotypes into standard reports
- Tackling SAP queries and ad-hoc queries
- Understanding SAP ERP HCM logical databases
- Using SAP switches
- Logging report start
- Wrap-up
Reporting, also known as analytics, is the key answer in these challenging times.

It ranges from functional needs to report on, audit requirements, follow-up needs, troubleshooting, or simply deliver information in order to meet legal requirements.

SAP is well equipped with reporting tools. SAP ERP HCM reporting supports this reputation.
The four reporting areas within SAP R/3

- **Standard Reporting**
  - ABAP Queries
  - Adhoc Queries

- **User Exit (UE)**
  - Business Add Ins (BAAdl’s)
  - Business Applic. Prg. Interface (BAPIs)
  - Re-use of standard Function Modules

- **Specific programming / Development**

- **Business Intelligence (BI)**
  - Xcelsius
  - Business Warehouse (BW)
  - Business Objects (BO)
  - Crystal Reports
  - High-Performance Analytic Appliance (HANA)
  - ...

- **SAP**
  - STANDARD SAP
  - ENHANCEMENT AREA
  - DEVELOPMENT AREA
  - FULL (extended) REPORTING ACCESS
Introduction

Accessing SAP ERP HCM reports

Report Direct Launch

Configuration Options

Payroll Infotypes

SAP Queries and Adhoc Queries

SAP HCM Logical Databases

SAP Switches

Log report start

Wrap up
Since SAP R/3 release 4.6, SAP provides reports in folders:

- Reports = standard reports
- Reporting tools = SAP Queries and Adhoc Queries
- Settings
Discovering SAP ERP HCM Reports and Their Names

- Through transaction SARP: Reporting (Tree Structure), select Reporting tree HR00 – Human Resources
Through transaction SARP: Reporting (Tree Structure), execute Reporting tree HR00 – Human Resources

Enable here the display of the technical names
Each report is part of a naming convention:

- RP ... Personnel Administration like
- RH ... Organizational Management and Personnel Development
- RPT ... Personnel Time Management
- RPL ... Lists in Personnel Administration
- RPB ... Statements

Naming conventions can be useful when dealing with Authorizations. For example, you could restrict access to all reports beginning with RPL.
- Each report can be launched directly through transaction SA38 (Functional user) or SE38 (developer)
- For example: report RPLMIT00 – Employee List
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    - SAP Queries and Adhoc Queries
    - SAP HCM Logical Databases
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Each SAP ERP HCM report selection screen can be adjusted using both of the following customizing configuration steps:

- **Create Report Categories**
  - Transaction Code: S_AHR_61010395 (table T599D)

- **Assign Report Categories**
  - Transaction Code: S_AHR_61010402 (table T599B)
For example: Select the time frame and specify whether Organizational Management is allowed.

Select the fields to be used in the selection screen.

Map the required reports against the configured report category.
Standard vs. Configured Selection Screen

Employee List

Selection
- Personnel Number
- Employment status
- Personnel area
- Personnel subgroup
- Employee group
- Employee subgroup

Report-specific selections
- Last name
- Name at Birth
- First name
- Nationality
- New employees in period
- Gender
  - Both genders
  - Only male
  - Only female

Employee List

Further selections

Selection
- Employment status

Report-specific selections
- Last name
- Name at Birth
- First name
- Nationality
- New employees in period
- Gender
  - Both genders
  - Only male
  - Only female

List format
- Cost center text required
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Accessing SAP ERP HCM reports
Configuration Options

Payroll Infotypes

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One of the key challenges today is real time reporting.

As we are all aware, SAP is storing information in infotypes.

Real processed information is stored in larger tables also known as ‘clusters’.

The issue at hand, besides getting security access clearance to the data, is to be able to format that processed data:

Often standard reporting like RPCLSTRD - Display Cluster RD (Payroll Results for Germany) is too complex for end users to apprehend

Thanks to a standard functionality known a ‘Payroll Infotypes’, users can

Retrieve data from the Payroll clusters into customers infotypes
Access these infotypes through standard transactions (ie PA20)
Add these infotypes in their infosets so it can be used in Queries.
As of release 4.6, payroll clusters can be accessed directly, for reporting purposes, through the Payroll infotypes.

The table illustrates the access path, the table name, and direct transaction code direct.
<table>
<thead>
<tr>
<th>Customizing Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct menu access</td>
<td>IMG ➔ Personnel Management ➔ IMG ➔ Personnel Management Human Resources Information System ➔ Reporting ➔ Payroll Results</td>
</tr>
<tr>
<td>Table</td>
<td>Direct Access to Customizing Step</td>
</tr>
<tr>
<td>V_T52IC</td>
<td>S_AHR_61010413 Define Evaluation Wage Types</td>
</tr>
<tr>
<td>V_T52IE</td>
<td>S_AHR_61010418 Assign Wage Types</td>
</tr>
<tr>
<td>T582S and V_T52IB</td>
<td>S_AHR_61010423 Set Up Payroll Infotypes</td>
</tr>
<tr>
<td>V_T52IF</td>
<td>S_AHR_61010427 Set Up Assignment to Payroll</td>
</tr>
<tr>
<td>SA38</td>
<td>Run program RPABRI00 – Fill Payroll Results after Payroll Cycle has run</td>
</tr>
</tbody>
</table>
1. Define Evaluation Wage Types
In this step, you define your Evaluation wage, decide whether there is a cumulation (like monthly, quarterly, etc.) and if you decided to pick the amount or the number

2. Assign Wage Types
Map your evaluation wage type against the Wage types used in Payroll
   It will ensure that you are retrieving the correct Payroll data

3. Set up Payroll Infotypes
Select the range (9000 – 9999) from the infotype Customer Include (CI) that you want to use to generate a specific Payroll Infotype (such as 94XX)
4. Set up Assignment to Payroll
   Activate the Payroll Infotype you just created

5. Schedule report RPABRI00 – Fill Payroll Infotypes – to run right after your Payroll Program (RPCALCX0 where X stands for your country; for example, Belgium uses RPCALCB0)

   This will secure that Payroll data is made available once Payroll has run
Payroll Infotype Configuration Steps (cont.)

**Optional**
(Only applicable if CATS is in use)

- Run Transfer to PM/CS/CO/PS/HR
- Program RCATSTAL
- Run Transfer to MM/SD
- Tcode CATM

**Step 1**

- Run Time Evaluation Program RPTIME00
- Run Payroll Program RPCALCX0 (*)

**Step 2**

**Step 3**

**NEW Step 4**

Run Payroll Infotypes Filling Program RPABRI00

(*)
- 'X' stands for international payroll
- Replace 'X' by your country
- For example Belgian Payroll: RPCALCB0

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Personal Work Schedule (Simulated Infotype 2500)

The *Personal Work Schedule* simulated infotype provides information from the personal work schedule.

We can use the Personal Work Schedule simulated infotype for our own ABAP programs and for reports using SAP Query, since it is stored in the logical database PNP, as other infotypes are. For example, you can create an overview of the planned working hours for each personnel area for each month.
Employee Time and Labor (Simulated Infotype 2501)

In the Employee Time and Labor simulated infotype, you can use a reporting time type (also referred to as a time type for reporting) to create a uniform view on quota data from various Time Management datasets (attendances, absences, employee remuneration information, and time evaluation results from tables ZES, ZL, C1 and ALP).

We can use the Employee Time and Labor simulated infotype for our own ABAP programs and for reports using SAP Query, since it is stored in the logical database PNP, as other infotypes are.
Quota Statuses (Simulated Infotype 2502):

In the Quota Statuses simulated infotype, we can use a reporting quota type (also referred to as a quota type for reporting) to create a uniform view on quota data from various Time Management datasets (attendance quotas and absence quotas).

We can use the Quota Statuses simulated infotype for your own ABAP programs and for reports using SAP Query, since it is stored in the logical database PNP, as other infotypes are.

We can use the Quota Statuses simulated infotype to create leave statistics that group together various absence quotas, for example.

We create a reporting quota type for Leave in Customizing, and use the quota type to group the time data we require.
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Accessing the reports
Discover HCM reports and their name
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SAP Queries and Adhoc Queries
SAP HCM Logical Databases
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Wrap up
SAP queries are made available for all SAP components. It provides the flexibility to the Business to create required reports not covered by the SAP standard as ‘customer specific’.

SAP ad-hoc queries are meant only for SAP ERP HCM components. Adhoc queries are dedicated to the sole use of Human Resources users.

We are doing our utmost to use and run standard reports. However, specific needs can arise. They can be answered in most case by a Query. It’s up to the user to decide if they would use the SAP Query and/or the Adhoc Query.
To create queries, perform the following steps:

Create infosets
Create usergroup: assign infosets and users
Assign relevant Authorization for using the Groups, the infosets and the master data
Assign the relevant user parameter to the user in order to defaults values

Start creation of query!
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- SAP HCM Logical Databases
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SAP tables are consolidated and grouped into ‘logical databases’, throughout the whole the system, across all components. It can be viewed through transaction SE36.

In fact you are accessing logical database without knowing, for example when running transaction PA30 – Maintain Personnel Data. The system is running report ‘SAPDBPNP’ which means accessing the SAP Database for Master Data in Personnel Administration.
Logical database are also the preferred source of information when
dealing and creating a SAP Query.

It is also a question in the SAP Certification exam: ‘What are the
Logical Databases?’, ‘Can you name them?’
Most standard HCM infosets are built on SAP ERP HCM logical databases

As of SAP R/3 enterprise version 4.70, there are four logical databases (Excluding Travel Management):

> Identify them as it will be required when creating an infoset.

- PNP contains infotypes from Personnel Administration, Personnel Time Management, and Specific infotypes
  - Range 0000-0999
  - Range 9000-9999
• PNPCE contains infotypes from Personnel Administration, Personnel Time Management, and Specific infotypes, enhanced with Concurrent Employment (CE)
  Use PNPCE by default, even if CE is not in use, because it has better response times

• PCH contains infotypes from Personnel Development and Specific infotypes
  • Range 1000-1999
  • Range 9000-9999

• PAP contains infotypes from Recruitment and Specific infotypes
  • Range 4000-4999
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As of SAP R/3 version 4.70, SAP ERP HCM queries can be further enhanced with the easy add-on known as “switch” in order to solve most pitfalls such as:

Redundant records
Empty records
Add selection criteria
...

These reporting switches can be easily added to the infoset
Tune for better data display your infosets using the switches.

- SAP Query
- Ad Hoc Query
- Generated Coding
  - Selection screen
  - Data selection
  - Data processing
  - Calculation of additional data
  - Control of output

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To prevent duplicate lines in master data, for example, turn on switch “BL_ALLOW_DUPL_LINES” with the return value X in the infoset.

**Existing Records on Data Base:**

<table>
<thead>
<tr>
<th>PersNr.</th>
<th>Last Name</th>
<th>First Name</th>
<th>City</th>
<th>Street</th>
<th>Look</th>
</tr>
</thead>
<tbody>
<tr>
<td>10001000</td>
<td>Smith</td>
<td>Philipp</td>
<td>Chicago</td>
<td>Wilshire Blvd</td>
<td></td>
</tr>
<tr>
<td>10001000</td>
<td>Smith</td>
<td>Philipp</td>
<td>Boston</td>
<td>Lake Avenue</td>
<td>X</td>
</tr>
<tr>
<td>20002000</td>
<td>Gillet</td>
<td>Helene</td>
<td>New York</td>
<td>12th. Street</td>
<td></td>
</tr>
<tr>
<td>20002000</td>
<td>Gillet</td>
<td>Helene</td>
<td>San Francisco</td>
<td>Bay Street</td>
<td></td>
</tr>
</tbody>
</table>

**Basic List with Switch active:**

<table>
<thead>
<tr>
<th>PersNr.</th>
<th>Last Name</th>
<th>First Name</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>10001000</td>
<td>Smith</td>
<td>Philipp</td>
<td>Chicago</td>
</tr>
<tr>
<td>10001000</td>
<td>Smith</td>
<td>Philipp</td>
<td>Boston</td>
</tr>
<tr>
<td>20002000</td>
<td>Camino</td>
<td>Helena</td>
<td>New York</td>
</tr>
<tr>
<td>20002000</td>
<td>Camino</td>
<td>Helena</td>
<td>San Francisco</td>
</tr>
</tbody>
</table>

**Basic List with Switch not active (Standard):**

<table>
<thead>
<tr>
<th>PersNr.</th>
<th>Last Name</th>
<th>First Name</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>10001000</td>
<td>Smith</td>
<td>Philipp</td>
<td>Chicago</td>
</tr>
<tr>
<td>20002000</td>
<td>Camino</td>
<td>Helena</td>
<td>New York</td>
</tr>
<tr>
<td>20002000</td>
<td>Camino</td>
<td>Helena</td>
<td>San Francisco</td>
</tr>
</tbody>
</table>
The Switches manual can be downloaded from SAP Service Marketplace.

SAP Note 305118 - Eliminating various query problems in HR
Agenda

- Introduction
- Learning about SAP ERP HCM reports
- Report Direct Launch
- Configuration Options
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- SAP Queries and Adhoc Queries
- SAP HCM Logical Databases
- SAP Switches

- Log report start
- Wrap-up

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A customizing step enables you to protect and log report starts for “sensitive” reports such as the Payroll and the Time Evaluation. This is done through transaction S_AHR_61011176 or table V_T599R.

**New Entries: Overview of Added Entries**

<table>
<thead>
<tr>
<th>Prog.Name</th>
<th>Record online</th>
<th>Prot batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPCALCB0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RPTIME00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAPTIPS_PROGRAM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Agenda

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- Accessing the reports
- Discover HCM reports and their name
- Technical naming convention
- Report Direct Launch
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What we covered

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- Learning about SAP ERP HCM reports
- Report Direct Launch
- Configuration Options
- Payroll Infotypes
- SAP Queries and Adhoc Queries
- SAP HCM Logical Databases
- SAP Switches
- Log report start
Everything you ever wanted to know about SAP HCM Reporting by Martin Gillet


<table>
<thead>
<tr>
<th>Transaction Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPIS</td>
<td>Structural Graphics</td>
</tr>
<tr>
<td>SARP</td>
<td>Display reporting tree</td>
</tr>
<tr>
<td>PFCG</td>
<td>Profile Configurator (Authorizations)</td>
</tr>
<tr>
<td>SE43N</td>
<td>Area Menus (Replaces functionality from transaction SARP)</td>
</tr>
<tr>
<td>SA38</td>
<td>Launch program (functional users)</td>
</tr>
<tr>
<td>SE38</td>
<td>Launch program (technical users)</td>
</tr>
<tr>
<td>S_AHR_61010395</td>
<td>Create Report Categories</td>
</tr>
<tr>
<td>S_AHR_61010402</td>
<td>Assign Report Categories</td>
</tr>
<tr>
<td>SHD0</td>
<td>Transaction Variant</td>
</tr>
<tr>
<td>S_AHR_61010413</td>
<td>Define Evaluation Wage Types</td>
</tr>
<tr>
<td>S_AHR_61010418</td>
<td>Assign Wage Types</td>
</tr>
<tr>
<td>S_AHR_61010423</td>
<td>Set Up Payroll Infotypes</td>
</tr>
<tr>
<td>S_AHR_61010427</td>
<td>Set Up Assignment to Payroll</td>
</tr>
<tr>
<td>SQ02</td>
<td>Infoset</td>
</tr>
<tr>
<td>SE36</td>
<td>Logical Database</td>
</tr>
<tr>
<td>SQ03</td>
<td>SAP Query: Maintain user groups</td>
</tr>
<tr>
<td>SQ01</td>
<td>SAP Query – Maintain Queries</td>
</tr>
<tr>
<td>S_PH0_48000513</td>
<td>Adhoc Queries</td>
</tr>
<tr>
<td>S_AHR_61011176</td>
<td>Log report starts</td>
</tr>
<tr>
<td>SE93</td>
<td>Maintain Transaction</td>
</tr>
</tbody>
</table>
- RPLMIT00 - Provides a detailed list of employees
- RPLICO10 - Provides a flexible list of employee Data
- RPLINFC0 - Infotype Overview for Employee (normally used for Swiss personnel data)
- RPUAUD00 - Logged Changes in Infotype Data (Personnel Administration)
- RHCDOC_DISPLAY - Display Change Documents (Personnel Development)
- SAPLEHUS - ESS User Utilities, including monitoring of user mapping (infotype 0105 Communication – Subtype 0001)
- RHRHDL00 - Delete Data Records from Personnel Planning Database
- RHGRENZ0 - Delimiting Personnel Development Objects
- RHGRENZ1 - Set New End Date for Personnel Development Objects
- RHGRENZ2 - Delimit Infotypes
- RHGRENZ4 - Set New End Date
- RPUFIXDS - Repairing Data Sharing Inconsistencies (i.e., when working with Employee Self Service - ESS)
- HFIUCPL0 - Personnel numbers that have to be unlocked for payroll runs
- RSTXPDFT4 - Converting SAPscript (OTF) or ABAP List Spool Job to PDF
- RPASR_TEST_PROCESS_EXECUTION - Test Processes for HR Forms
- FP_PDF_TEST_00 - Test Program: Adobe Version Information (for Analysis Only)
- SAP Help dot SAP dot com
- ASUG, SAP HR Communities
- SAP Mentor initiative
• sapmentors.sap.com
• Twitter @sapmentors

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Key Points to Take Home

- Investigate and review all standard reports provided by SAP, including the queries!
- Educate key user to enable reporting independence and allow the creation of queries
- Make life easier for end users – provide selection and display variants for all reports in use
- Take advantage of the HR switches provided for InfoSets
- Review and take advantage of Reporting configuration options
- Use standard features as provided by SAP, such as Payroll infotypes
- Check and assess with the security team which reports are required for audit and security monitoring
1705 - Getting the Most out of SAP Reporting Methodology

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SESSION CODE: 1705

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