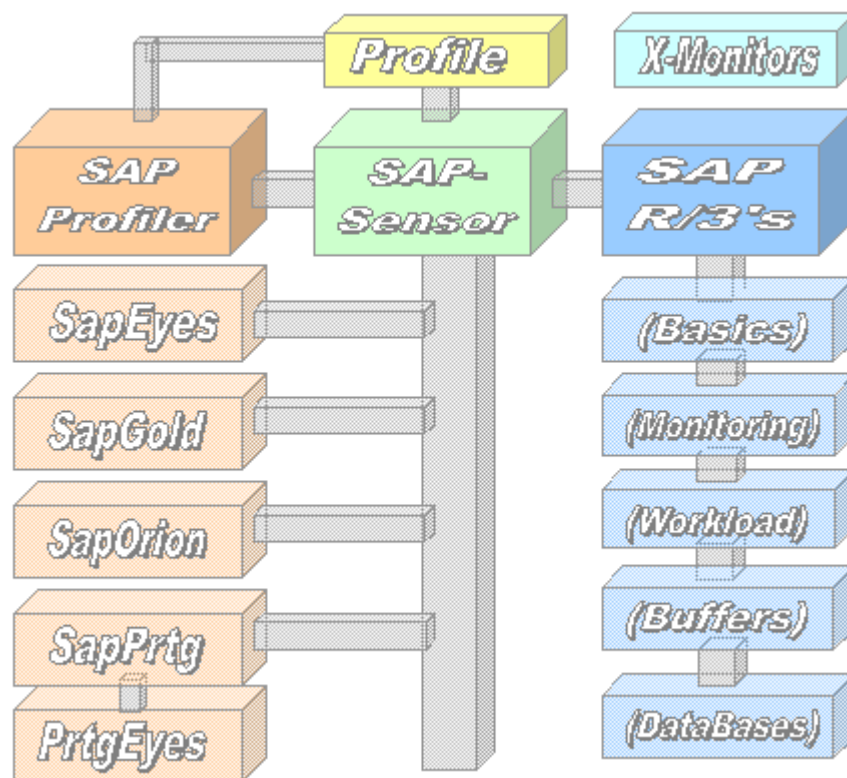


SAP-Sensors for X-Monitors

(SapPrtg - SapOrion - SapGold - SapEyes)



White Paper

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**ICON Software GmbH
Am Dorfplatz 10
D-92540 Altendorf**

Phone: +49 9675/9134-00

Web: <http://www.icon-software.de/>

Mail: Info@ICON-Software.de

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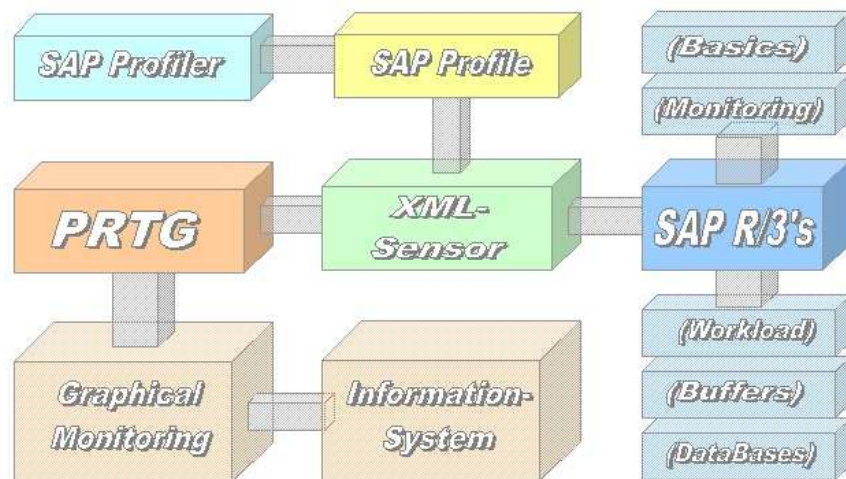
1. Overview

With the help of the SAP-Sensors you are able to get a lot of informations from SAP an direct them to the Network Monitor here PRTG from PAESSLER. Therefor no intervention to the SAP-System is required. You can contact lokal as remote SAP-Systems. The method to communicate with SAP is to use RFC (Remote Function Call). You only need the rights in conjunction with the user-name, password and client.

There is a set of extented sensors for SAP available. With this sensors you are able to read out many values from SAP and transfer them to the monitoring for analysing and monitoring.

The Working

For accessing a SAP-System a profile with the informations about the accessing-data like username, password and client is needed. This profile is generated via the tool „**SAP Profiler.Exe**“ which is part of the installation. The profile is stored into the Directory of Monioring. With the Profiler you can directly contact the SAP and view the informations.



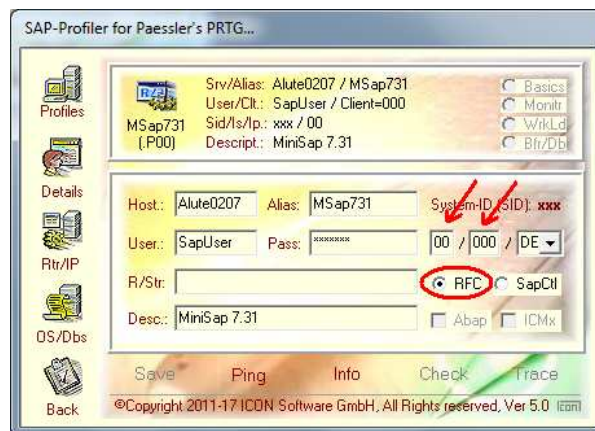
First, the sensor reads out the profile and opens a connection to SAP via RFC (Remote Function Call). With the knowledge of username, password and client it takes a login to SAP. Then the required function is processed within SAP and the resulting is transferred back to the sensor. The sensor formats it and divides it to an information-line and channels. This data are transferred then to the monitoring system.

Within the Monitoring-System the delivered informations are collected and prepared for analysis. They could be shown graphically and used for generating a mail or SMS to notify an administrator.

The Accessmethod „RFC“

The SAP-System will be contacted by the method "RFC" (Remote Function Call). This is a protocol based on CPI-C which is used by SAP for communications. The principle of the access is as:

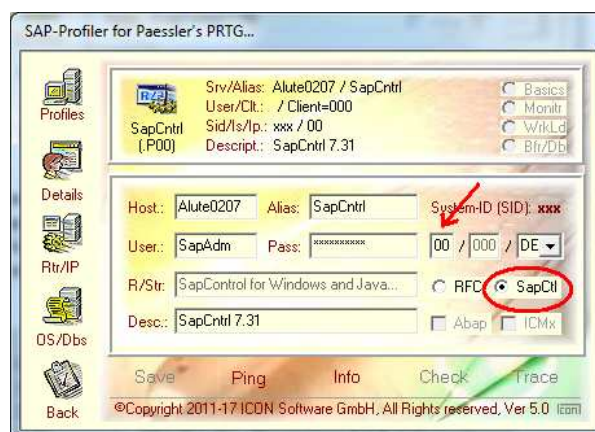
- Starting the sensor and reading the Profile (Hostname, Username, Passwort)
- Open the connection with RFC-Open-Function
- Calling the attached Function-Module within SAP
- Closing the connection with RFC-Close-Function
- Transfer the resulting as a XML-File for the monitoring



Accessmethod „SapControl“

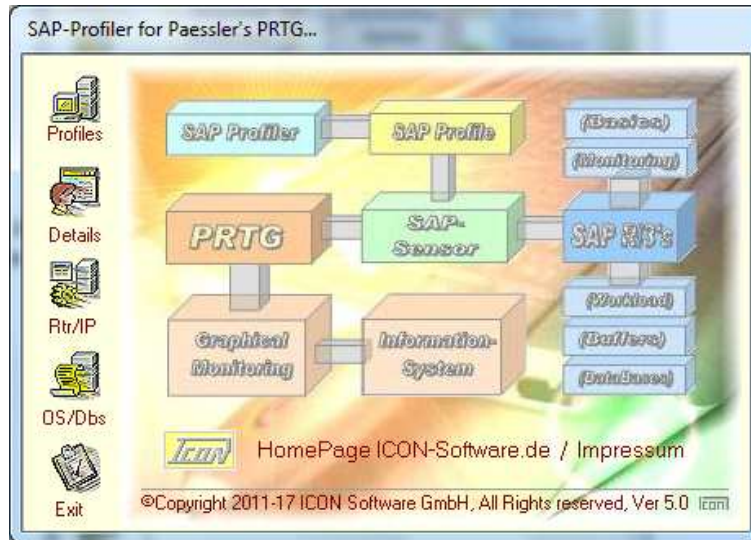
The SAP-System will be contacted by the method "SapControl":

- Starting the sensor and reading the Profile (Hostname, Username, Passwort)
- Starting the "SapControl" with the usage of an paramtre
- Calling the attached Function-Module from SAP
- Selection, analysis and compression of the available data
- Transfer the resulting as a XML-File for the monitoring

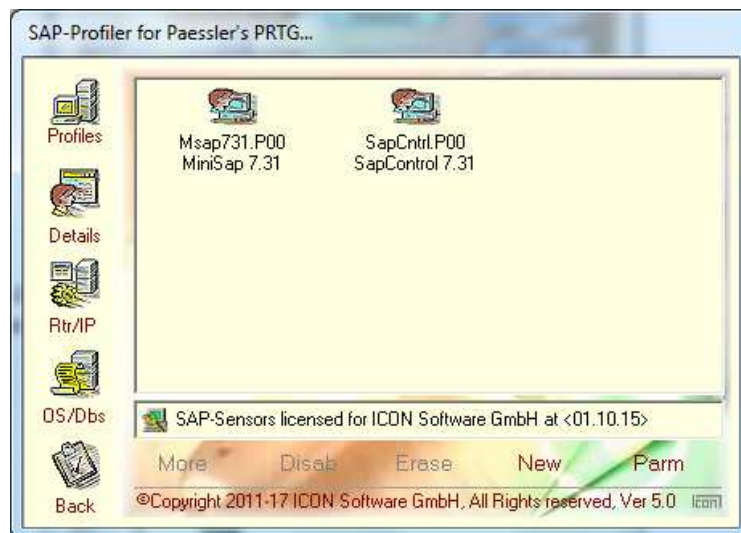


2. The SAP-Profiler

For the usage of sensors there is the definition of a profile required. You could create a profile via the “**SAP Profiler.Exe**” and put in the necessary informations for connecting to SAP. Additionally you are able to view the resulting before you define it within the monitoring.



The opening of the SAP-Profilers contains the reference to the homepage as well as the imprint. By clicking the symbol of "profile" one reaches in the overview.



Here the possibility exists to branch out to an already available profile or to put on a new profile by means of "New". By means of the symbolic strip on the left side other representation possibilities are available.

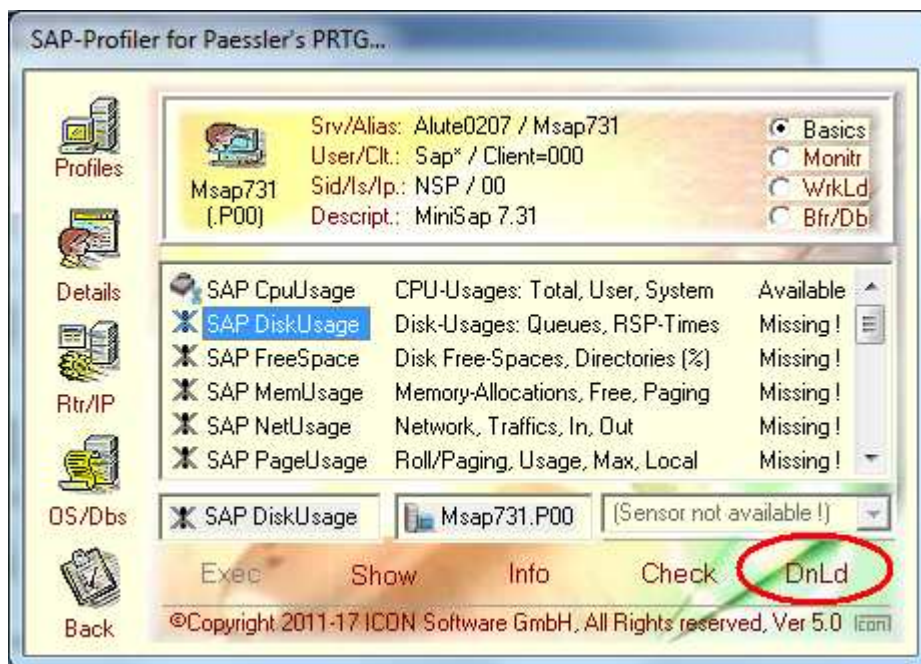
Interactive Testing

By using the „SAP Profiler“ you have the possibility to test the sensors interactively before implementing them to the monitoring. There are following ranges:

- **Basics** Functions from Basics
- **Monitr** Functions for Monitoring
- **WrkLd** Functions from Workload
- **Bfr/Db** Buffers und Databases

Interaktive Access via RFC

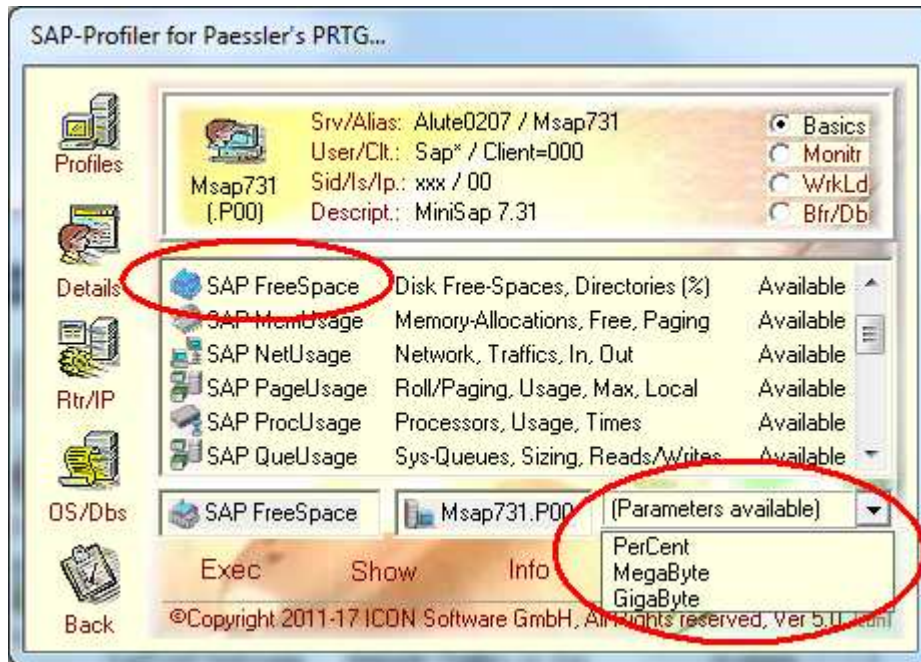
Here the example of the base functions (RFC):



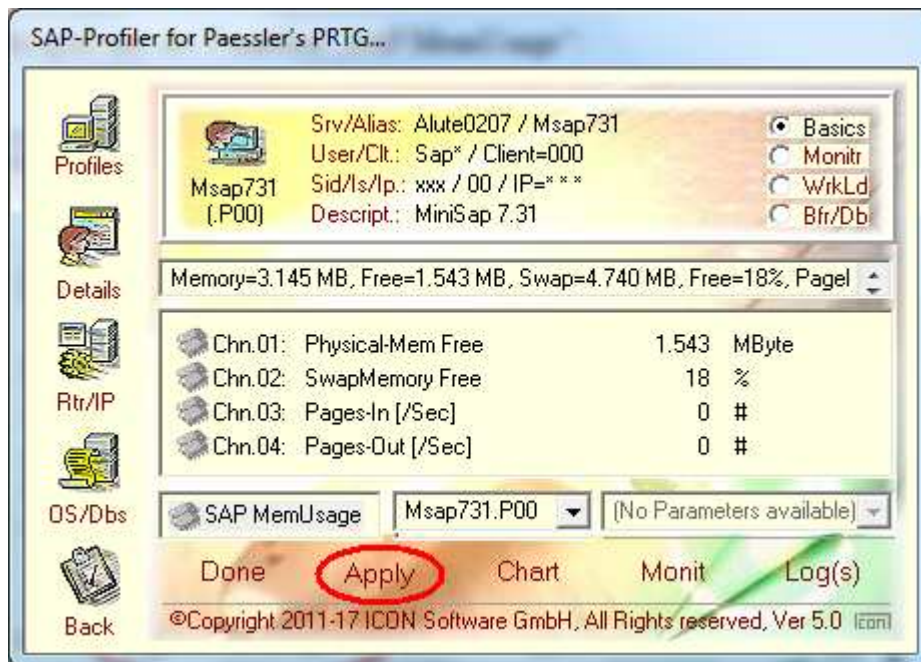
On this occasion, a list is suggested with the possible sensors for the well-chosen area. Here the desired sensor can be selected by clicking.

In this view the possibility also passes missing sensors about the badge "DnLd" (download) about the WEB to reload. Also to substitute for the method if necessary the topical sensor it is supported with the badge "Upgr" (Upgrade). On this occasion, the sensor deposited in the WEB is held ready in each case as an Exe file for the download.

According to sensor type possible parameters with are also supported if necessary:



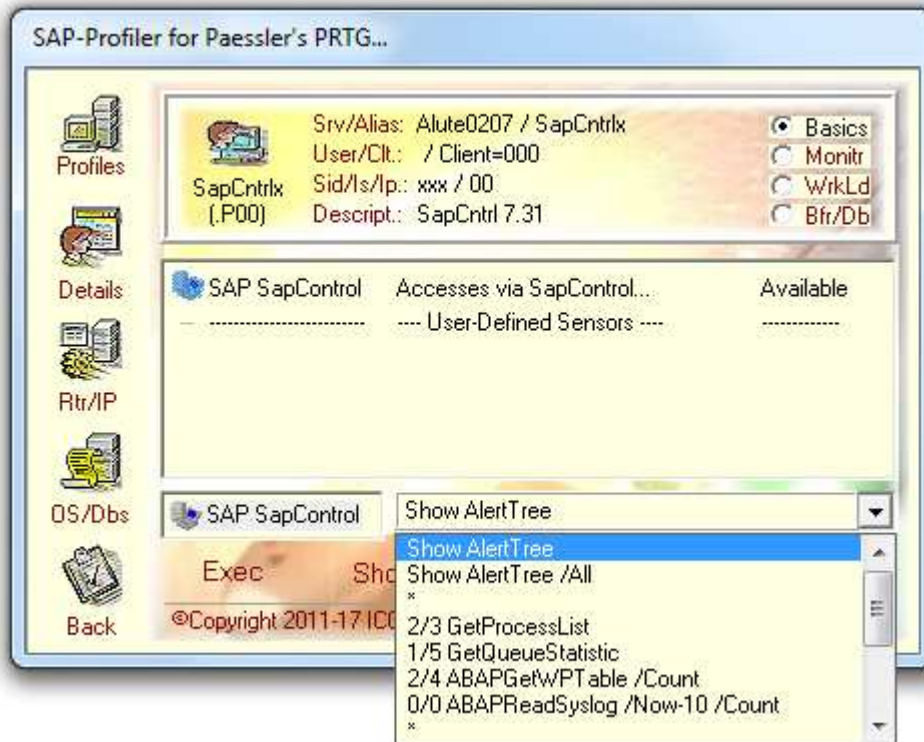
and here the result with the function "SAP MemUsage":



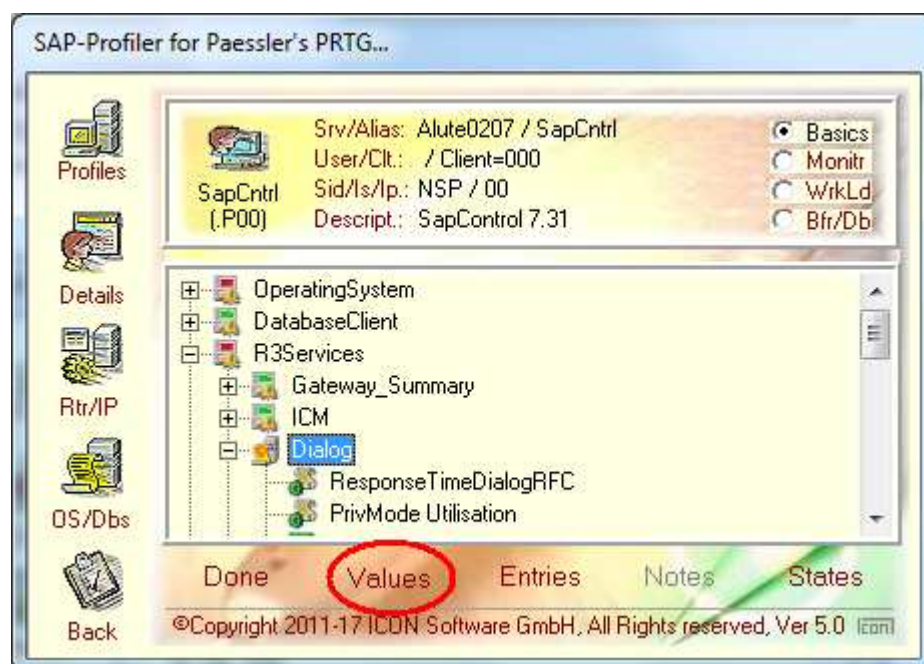
It are indicated beside the supported canals for the monitoring the attained data with. An action can be assigned in each case to these canals in dependence of the given value, possibly the mailing of mails.

If no valid licence or evaluation is deposited the data can be called away, nevertheless, about the SAP-Profiler by SAP, on this occasion, the attained data are expelled in dark red writing. With a planning in the monitoring no data would hand over, then the value "-1" is always expelled or handed over.

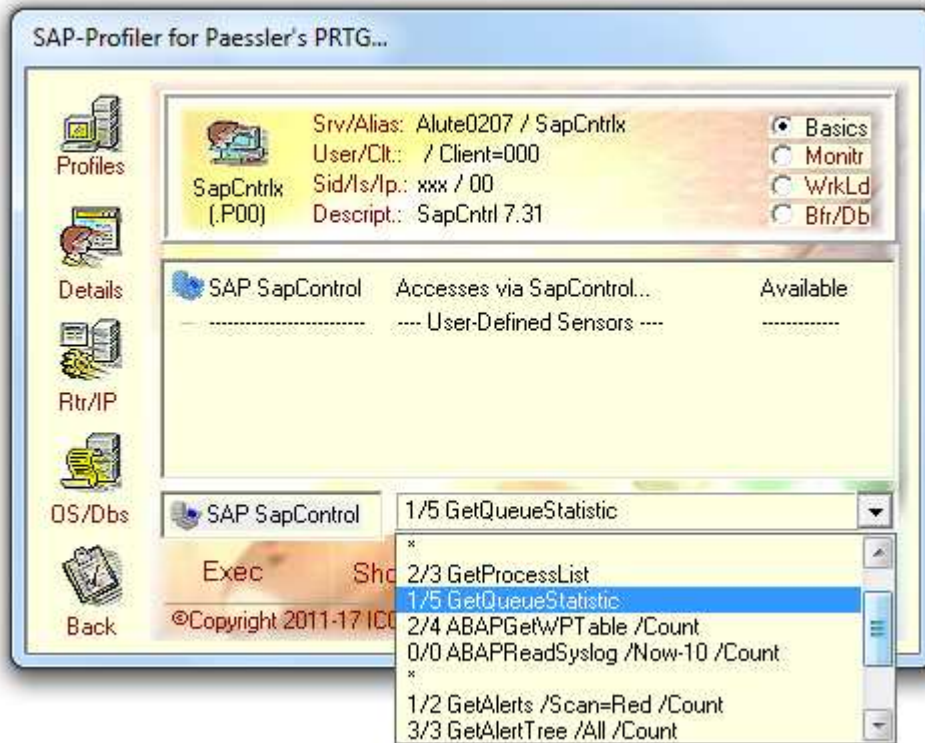
Here an example of indicating the Alerts (AlertTree):



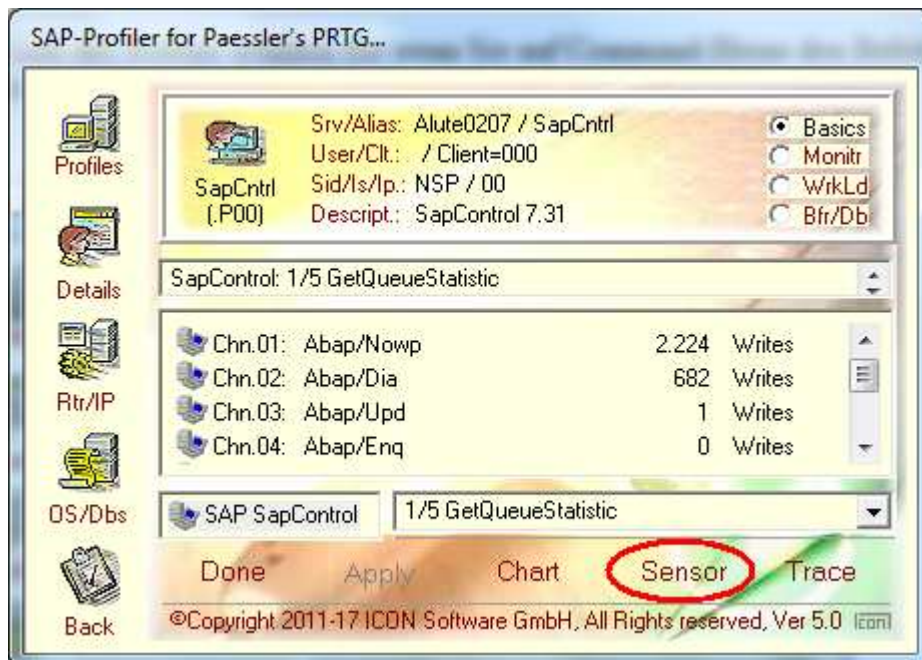
After the new arrangement merely the sensor "SAP SapControl" is suggested. At the visual announcement the single areas can be indicated on marking interactively. According to data structure different functions are offered.



An example of other orders from SapControl:

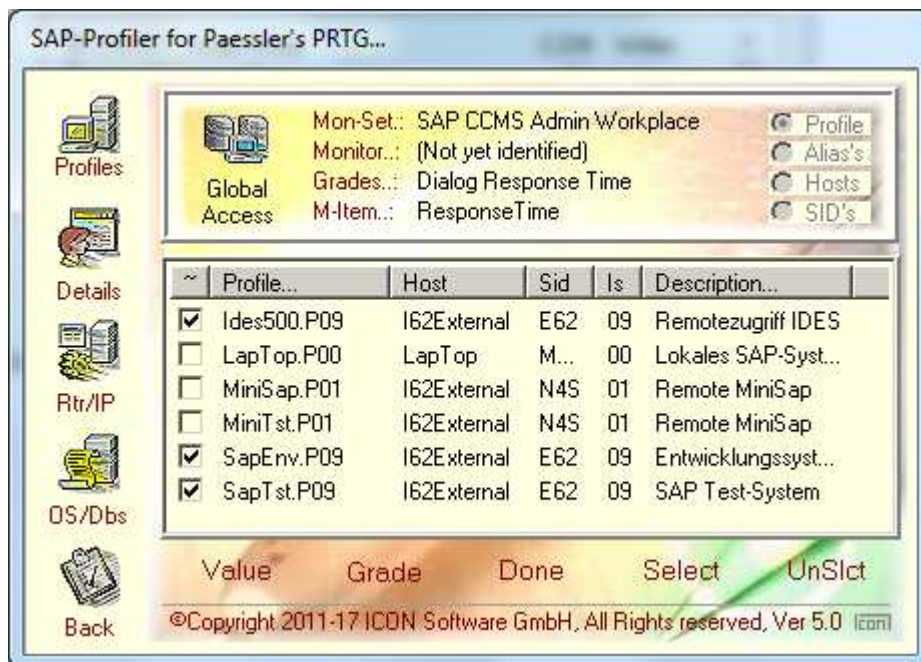


You receive the entire list of the orders if you at Command level the order "SapControl/Help | more" give. Example: Order "GetQueueStatistic":



3. Local/Global Sensors

The sensor could be used to access a single or a group of SAP-Systems. At the single usage only on SAP is consulted. By using the global feature a group of SAP's will be sequentially consulted. The resulting is transferred to monitoring. For example, you could request the Response-Times of all SAP-Systems.

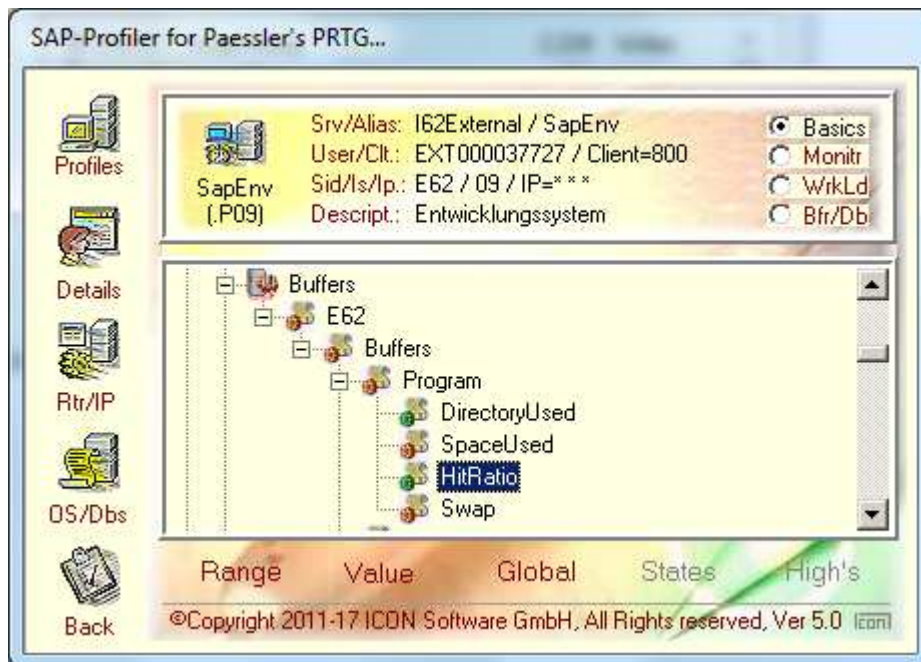


Within the monitoring you will see an overview of all collected responses at a glance.

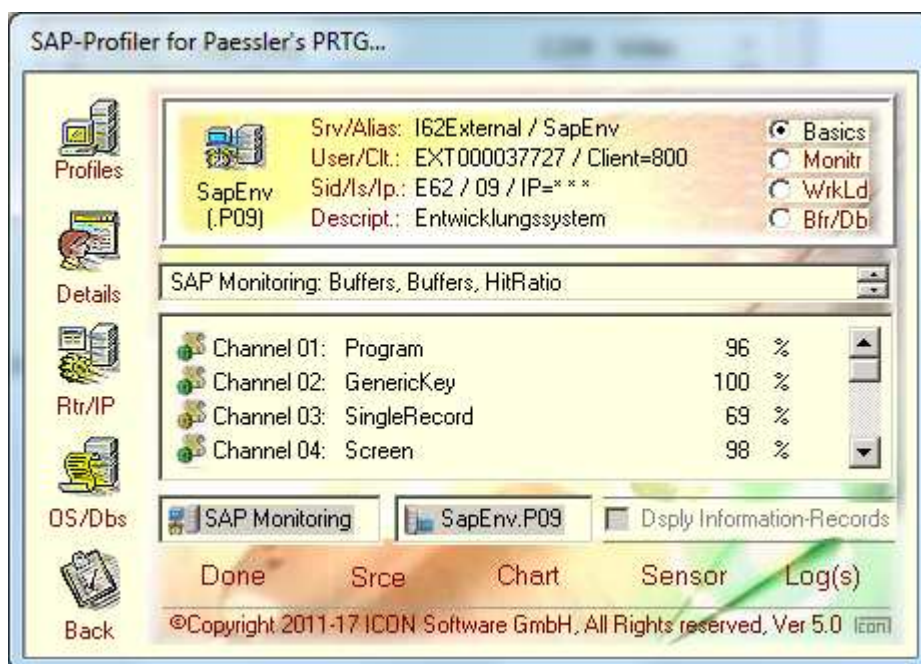


4. SAP CCMS Monitoring

Within the range of „SapMon“ you can request informations from SAP CCMS Monitoring, the transaction „RZ20“. There are data named by “Monitoring Sets”. This data are structured and contains a lot of informations. This informations you can call via the Profiler and transfer them to a sensor. This sensor could be used also within the monitoring.



The sensor "SAP Monitoring" reads the data directly from SAP and you are able to assign an Alias-Name. All offered values could be requested and transfered to the monitoring. By using the sensor within monitoring you are able to assign a reaction, for example sending a mail.



5. SAP User-Interface

As an extension to the sensors you are able to add user-data from SAP. Therefore you can create a usertable within SAP and fit it with your own data. The values of that table could be read and transferred to the monitoring. Therefore you need only a small table named "ZPRTG" (for PRTG) within the SAP-System.

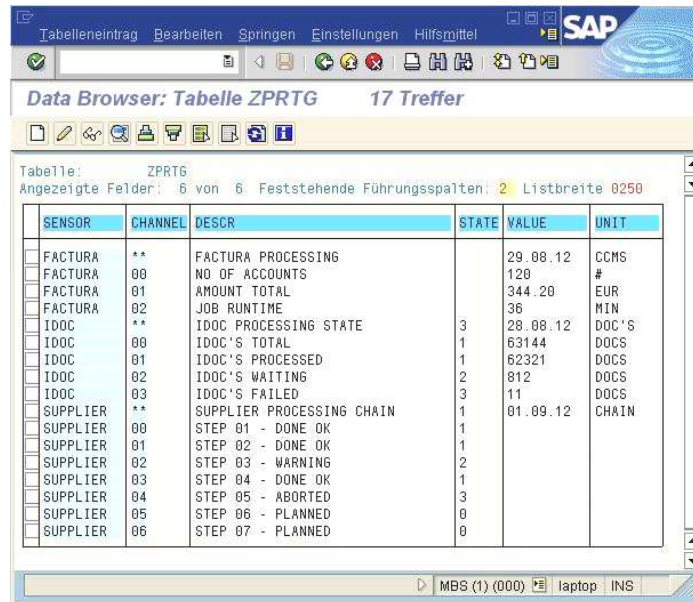


Table: ZPRTG
Angezeigte Felder: 6 von 6 Feststehende Führungsspalten: 2 Listbreite 0250

SENSOR	CHANNEL	DESCR	STATE	VALUE	UNIT
FACTURA	**	FACTURA PROCESSING		29.08.12	CCMS
FACTURA	00	NO OF ACCOUNTS		120	#
FACTURA	01	AMOUNT TOTAL		344.20	EUR
FACTURA	02	JOB RUNTIME		36	MIN
IDOC	**	IDOC PROCESSING STATE	3	28.08.12	DOC'S
IDOC	00	IDOC'S TOTAL	1	63144	DOCS
IDOC	01	IDOC'S PROCESSED	1	62321	DOCS
IDOC	02	IDOC'S WAITING	2	812	DOCS
IDOC	03	IDOC'S FAILED	3	11	DOCS
SUPPLIER	**	SUPPLIER PROCESSING CHAIN	1	01.09.12	CHAIN
SUPPLIER	00	STEP 01 - DONE OK	1		
SUPPLIER	01	STEP 02 - DONE OK	1		
SUPPLIER	02	STEP 03 - WARNING	2		
SUPPLIER	03	STEP 04 - DONE OK	1		
SUPPLIER	04	STEP 05 - ABORTED	3		
SUPPLIER	05	STEP 06 - PLANNED	0		
SUPPLIER	06	STEP 07 - PLANNED	0		

The contents of the User-Table could be organised as shown (Samples):

Sensor „Factura: A simple report for a done CCMS-Job. You could show the running dates and statistics. Only the data will be presented

Sensor „IDOC: A state for the IDOC's, the shown informations could be received via a small ABAP itself. You see the number of Idocs and there states

Sensor „Supplier: Presenting a processing chain. With a small ABAP you are able to store the state of each process. Only the state is shown

You can define an unlimited number of User-Sensors. The administration of them would be done by a small ABAP or a function. The selected table-entries are directly read and transferred to the monitoring. The assignments of reactions will be done directly by Monitoring-Administration.