



QuantityWare Working Paper

QuantityWare Integration into SAP CCMS Alert-Monitor

Version History

Version	Date	Description
00	2021-07-21	Initial Version
01	2021-07-28	Modern QW document style applied
02	2023-11-01	Editorial revision and confirmation

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1. Introduction & Summary

The SAP Computing Center Management System provides a special alert monitor for SAP NetWeaver Process Integration (PI). This alert monitor can be used to centrally monitor the PI components running on AS ABAP and AS Java (including the Business Process Engine). You can also use it to identify different categories of system errors and application errors in various interfaces and interface namespaces of the components involved.

Besides providing information on monitored components, the alert monitor also provides information about PI-relevant qRFC queues. These queues ensure that PI messages are processed once only and in chronological order.

The CCMS Alert Monitor provides the following features:

Automated, central monitoring that does not require any administration tasks, except where alerts occur.

- Proactive monitoring by means of alerts that are triggered as soon as a particular threshold value is not reached or is exceeded.
- Support for problem solving through predefined analysis functions, which you can use to identify and remove the cause of an alert in a specific component.

For more information, see [Monitoring Using CCMS - SAP Documentation - SAP Help Portal](#).

With this configuration, QuantityWare (QW) offers a collection of SAP CMMS Alert-Monitor (transaction RZ20) monitor sets allowing observation, notification, and analysis of critical business events such as:

- Expiring QW Usage Keys
- Failing QW Installation Tests
- Failing QW Test Scenarios
- Business Document Analysis

This configuration set is shipped with QuantityWare 3.0A CSP02 / 3.0B CSP01.

In this working paper, we provide technical and practical implementation guidelines.

2. Prerequisites

Software components

This configuration set may be applied on SAP Oil, Gas, & Energy platforms where the QuantityWare Software has been installed. For all currently supported combinations see [Note 000086 "Support and Release \(Lifecycle\) details"](#) page 2, "Release Lifecycle" on our internet portal.



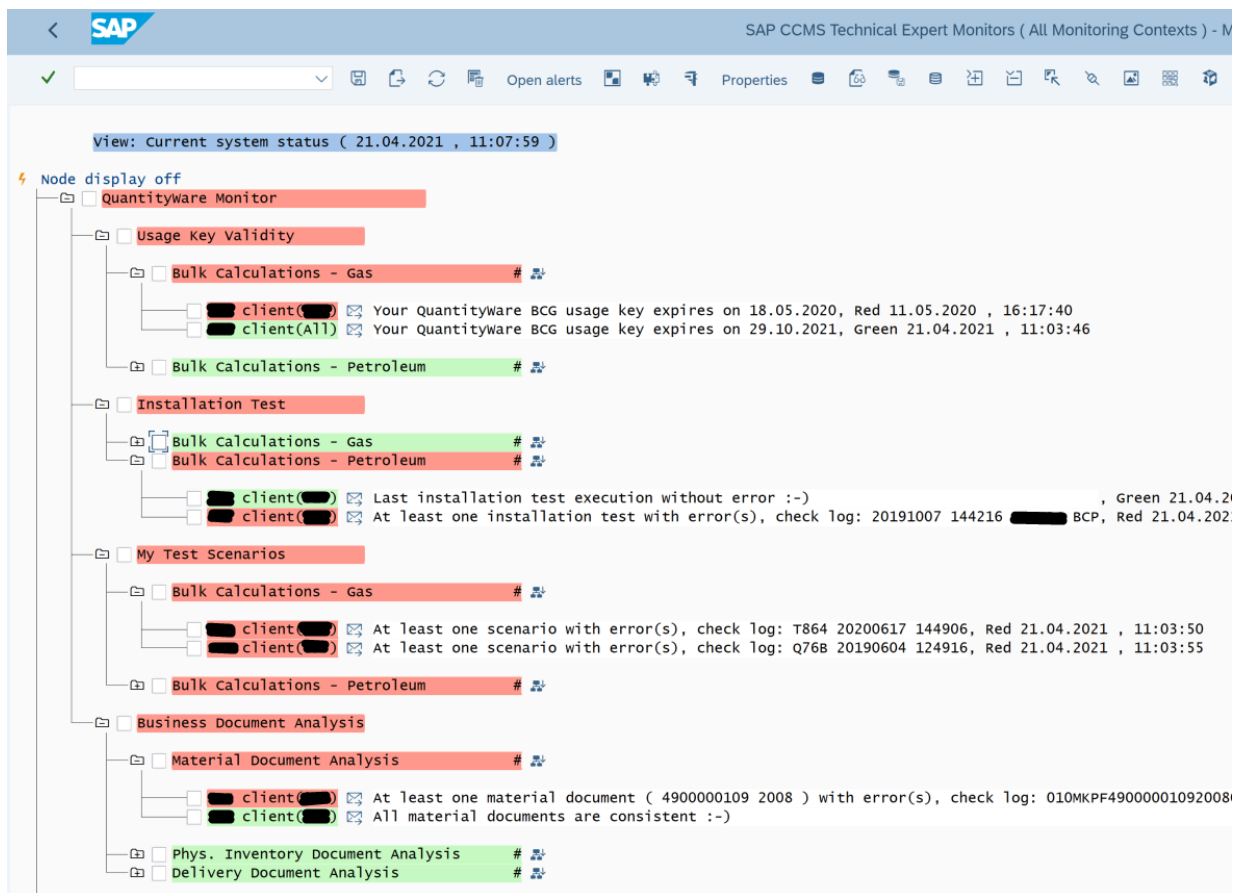
This software has not been released for a Solution Manager-based central CCMS Monitor.

According to [SAP note 176492 'Automatic email when an alert occurs \(RZ20\)'](#) dispatchers for collector & auto-reaction methods run only in client '000', consequently ensure you perform the **Installation** and **E-Mail Alerting Configuration** in client '000'.

3. Installation

3.1. The CCMS Monitor

The CCMS monitor is reached using transaction RZ20 -> CCMS monitor sets ->SAP CCMS Technical Expert Monitors -> All Monitoring Contexts where you find the QuantityWare specific tree, once the self-registration program /QTYW/CCMS_MONITOR has been successfully executed using transaction SA38.

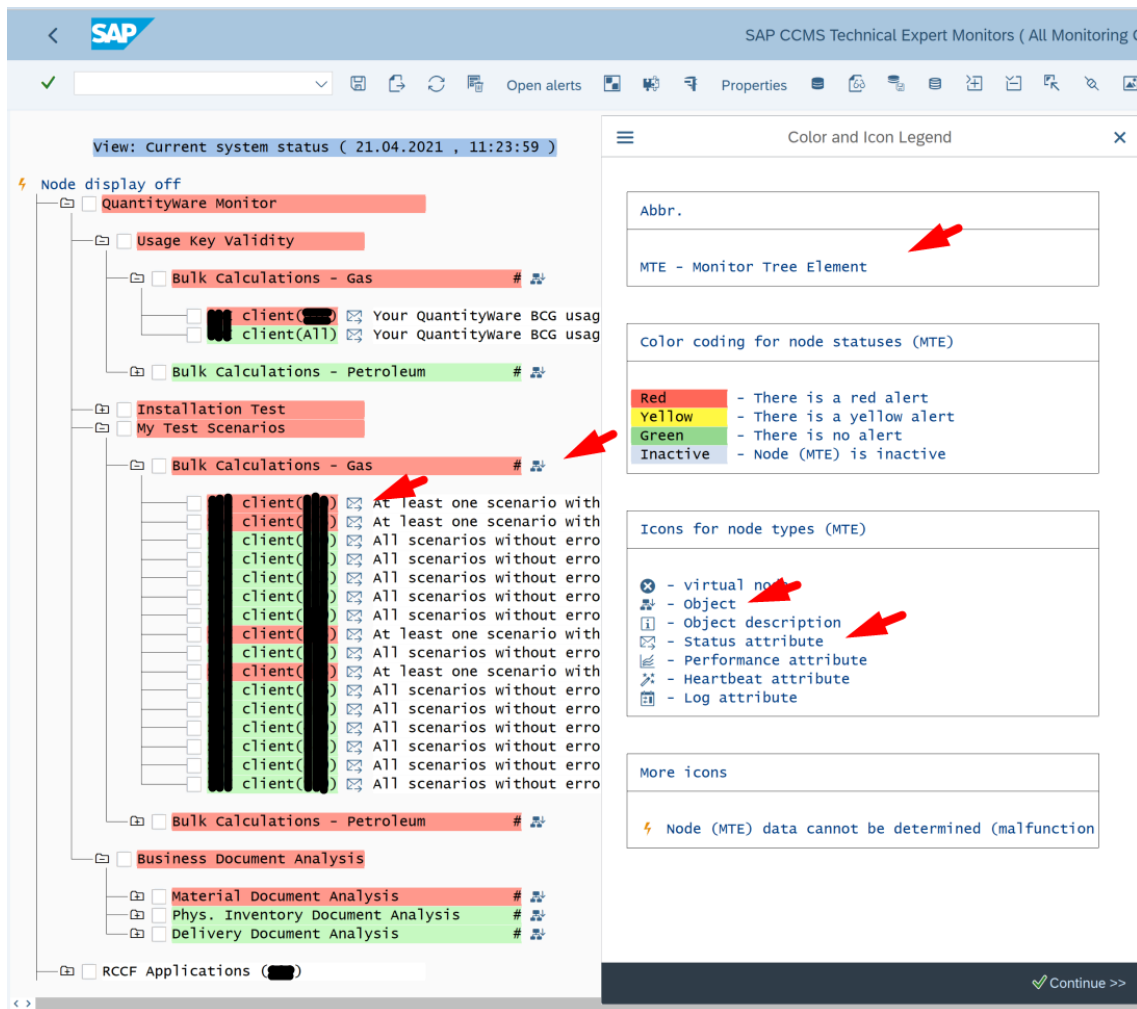


The screenshot shows the SAP CCMS Technical Expert Monitors interface. The view is set to 'Current system status (21.04.2021 , 11:07:59)'. The tree structure is as follows:

- QuantityWare Monitor
 - Usage Key Validity
 - Bulk Calculations - Gas #
 - client() Your QuantityWare BCG usage key expires on 18.05.2020, Red 11.05.2020 , 16:17:40
 - client(All) Your QuantityWare BCG usage key expires on 29.10.2021, Green 21.04.2021 , 11:03:46
 - Bulk Calculations - Petroleum #
 - Installation Test
 - Bulk Calculations - Gas #
 - Bulk Calculations - Petroleum #
 - client() Last installation test execution without error :-), Green 21.04.2021 , 11:03:55
 - client() At least one installation test with error(s), check log: 20191007 144216 BCP, Red 21.04.2021 , 11:03:55
 - My Test Scenarios
 - Bulk Calculations - Gas #
 - client() At least one scenario with error(s), check log: T864 20200617 144906, Red 21.04.2021 , 11:03:50
 - client() At least one scenario with error(s), check log: Q76B 20190604 124916, Red 21.04.2021 , 11:03:55
 - Bulk Calculations - Petroleum #
 - Business Document Analysis
 - Material Document Analysis #
 - client() At least one material document (4900000109 2008) with error(s), check log: 010MKPF49000001092008, Red 21.04.2021 , 11:03:55
 - client() All material documents are consistent :-), Green 21.04.2021 , 11:03:55
 - Phys. Inventory Document Analysis #
 - Delivery Document Analysis #

3.2. Explanation of Node Types of the Monitor Tree Elements (MTE)

We use “object” and “status” nodes – we will be referring to these throughout this working paper.



The screenshot displays the SAP CCMS Technical Expert Monitors interface. The main window shows a monitor tree with various nodes. A legend titled "Color and Icon Legend" is open on the right side, providing details on node statuses and types.

Color coding for node statuses (MTE)

Red	- There is a red alert
Yellow	- There is a yellow alert
Green	- There is no alert
Inactive	- Node (MTE) is inactive

Icons for node types (MTE)

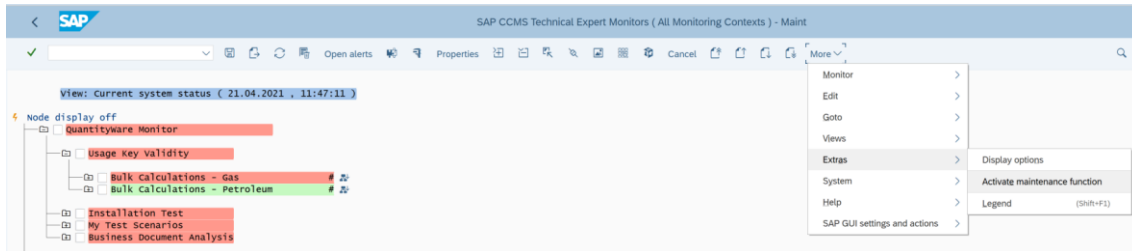
	- virtual node
	- Object
	- Object description
	- Status attribute
	- Performance attribute
	- Heartbeat attribute
	- Log attribute

More icons

- Node (MTE) data cannot be determined (malfunction)

Nodes which have no assigned node type e.g., “Installation Test” or “My Test Scenarios”, we will refer to as “topic” nodes.

3.3. Activate the CCMS Monitor “maintenance function”



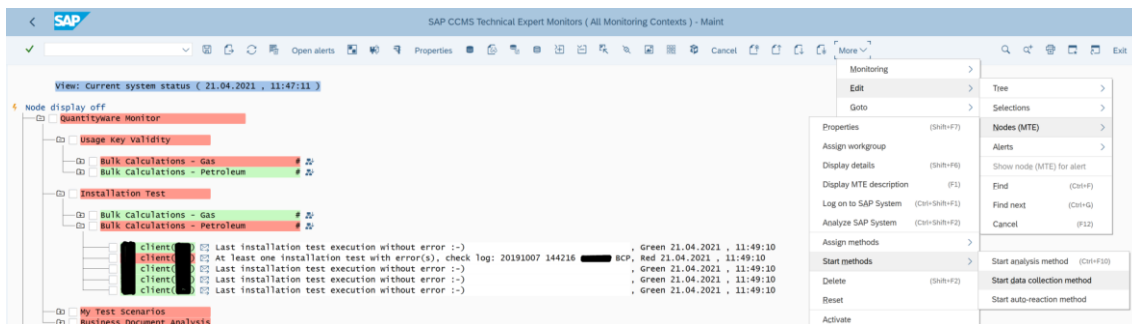
3.4. Initial Registration and Manual Collector Start

The initial registration of the monitor tree is performed by executing report /QTYW/CCMS_MONITOR. After this has completed successfully, we can see that functionalities behind an alert (tree element), such as the analysis methods, are not executable.

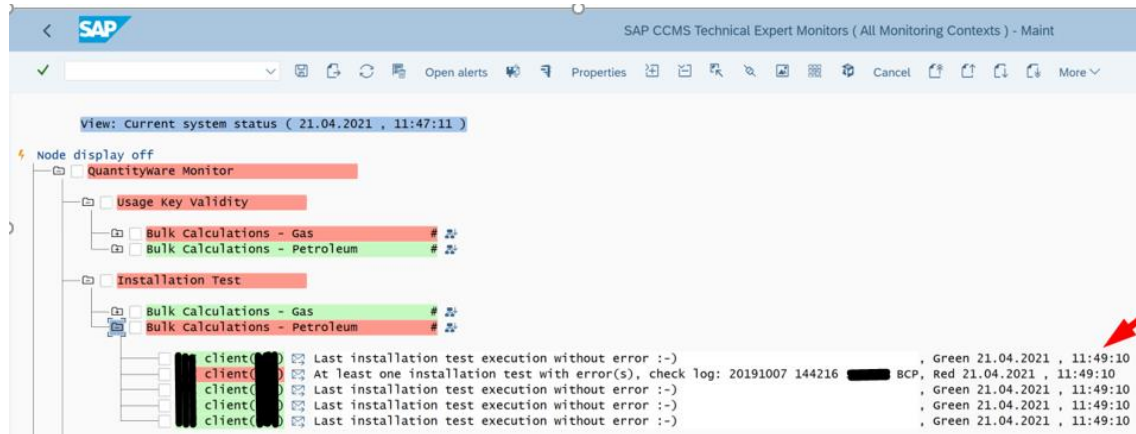
To complete the tree elements configuration, you must run the collectors manually.

3.5. CCMS Monitor “Start data collection method”.

Select the first status node and run the collection method manually via the menu for each topic.



A successful run results in a new time stamp.



Manually run the collector method for each topic node:

- Usage Key Validity
- Installation Test
- My Test Scenarios
- Material Document Analysis
- Phys. Inventory Document Analysis
- Phys. Inventory Document Analysis
- Delivery Document Analysis

... and verify the time stamp has been changed for all status nodes run.

3.6. Recommended Monitor Settings:

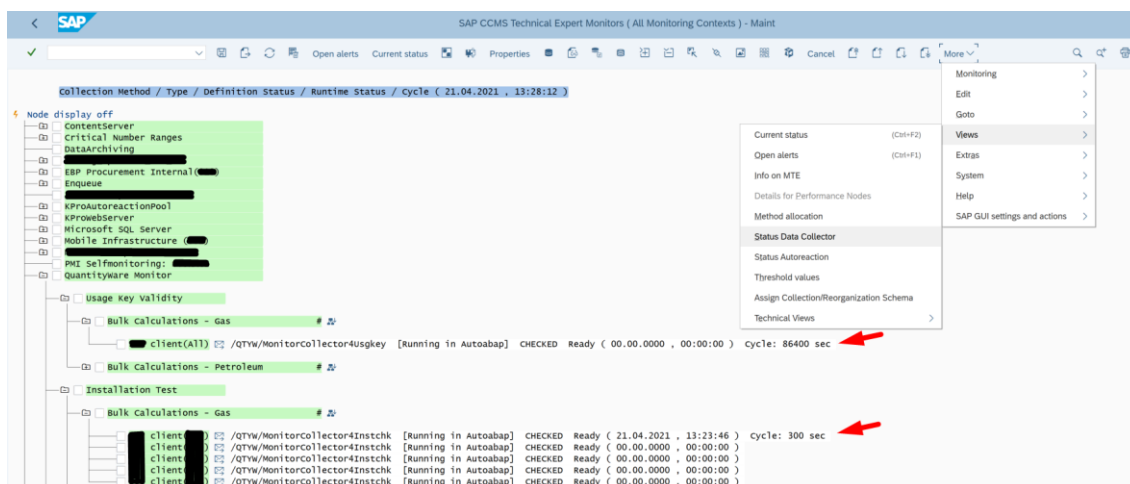
The self-registration program must be used to register the alert tree however, an automatic refresh is recommended. Again, be sure to **CCMS Monitor "Start data collection method"**.

Mark the first status node of the first object node and call 'Properties (Shift + F7)'. The value for the attribute 'Start the data collection method every' on the 'Method' tab strip should be set to 300 seconds.

Save your changes and select the standard SAP variant "*" as well as all relevant customer variants.

For each topic node, proceed as described above.

Verify your settings by changing to the 'Status Data Collector' view, where the actual runtime configurations are displayed.



'Usage Key Validity' - exception!

Customers using our Compliance & Transparency products for Petroleum and/or Gas (CTP / CTG), should skip this step as these products may be used without a valid usage key.

Previously, we recommended that the data collection method interval value 'Start the data collection method every' on the 'Status attribute' is set to '300'; for the "Usage Key Validity" topic node, a value of '86400' seconds (once a day) is more appropriate.

On the 'Status attribute' tab, if the attribute 'When should a message cause an alert?' has been set to 'Always (at every message)', for all status attribute nodes of the topic node 'Usage Key Validity' the value should be changed to 'Message value (color) has changed'.

Save your changes and select the standard SAP variant "*" as well as all relevant customer variants.

Perform this procedure for each of the status attribute node found under the node objects:

- 'Bulk Calculations – Gas'
- 'Bulk Calculations – Petroleum'.

3.7. User Maintenance – Roles

Add the following roles as described in chapter Authorizations and Roles.

Background reports to schedule:

The agents are programs scheduled as background jobs in the observed clients.

3.8. The Agents

The agents are programs listed in same order as in the CCMS monitor tree:

The usage key does not require an agent, as this information is a runtime variable and therefore available to the collector.

- /QTYW/INSTALLATION_TEST
Measurement Cockpit: Run QuantityWare Installation Test.
- /QTYW/MY_TEST_R
Measurement Cockpit: Run My Scenarios.
- /QTYW/CCMS_CREATE_LOG_MATDOC
Alert Monitor: Persist the appl.log of the material document analysis.
- /QTYW/CCMS_CREATE_LOG_INVDOC
Alert Monitor: Persist the appl.log of the inventory document analysis.
- /QTYW/CCMS_CREATE_LOG_DELDOC
Alert Monitor: Persist the appl. log of the delivery document analysis.

Depending on the level of customer-perceived criticality, background schedule timeframes should be configured based on use- and business-cases.

Example: If your transport release cycle is weekly, it would be sensible to schedule the “Run My Scenarios” report /QTYW/MY_TEST_R after such imports into landscape systems (e.g., the Quality system(s)) as you will then receive an alert if development has impacted your customer defined QW Test Scenarios.



The report /QTYW/INSTALLATION_TEST ‘Measurement Cockpit: Run QuantityWare Installation Test’ is a part of the QuantityWare installation procedure. It is designed only to be executed in client 045 (which should not be modified or changed in any manner by the customer). It is usually only run to confirm that the installation has completed successfully and is not intended to be scheduled periodically.

If intensive gatekeeper alerting is configured to prevent an extensive manual correction effort for inconsistent business documents, the execution runtimes and the schedule times must be considered, as parallel job executions for agent programs are not possible and runtimes depend on the number and complexity of documents posted.



Only documents from the last job execution date will be processed – with a maximum period of 7 days. i.e., the last job run was on April 1st, the next job run is scheduled on April 10th, only documents from April 04th to April 10th will be processed.

If the agent program is scheduled for the first time in a system, only business documents from the last seven days are taken into consideration. Thus, the first job run may run longer than following jobs.

It is strongly recommended to align the agents and their execution schedule with your companies' business experts or your Governance, Risk & Compliance group.

3.9. Auto-Reaction Similar to Function SALO_EMAIL_IN_CASE_OF_ALERT_V2

For configuration, refer to:

[SAP note 176492 'Automatic email when an alert occurs \(RZ20\)'](#) and

[SAP note 939616 'CCMS auto-reactions: Help with troubleshooting'](#)



QuantityWare has extended the functionality of SAP function module SALO_EMAIL_IN_CASE_OF_ALERT_V2 allowing dynamic client assignment and definition of an RML address or E-Mail recipient.

The standard functionality according to SAP note 176492, Example 2, dynamic, is as follows:

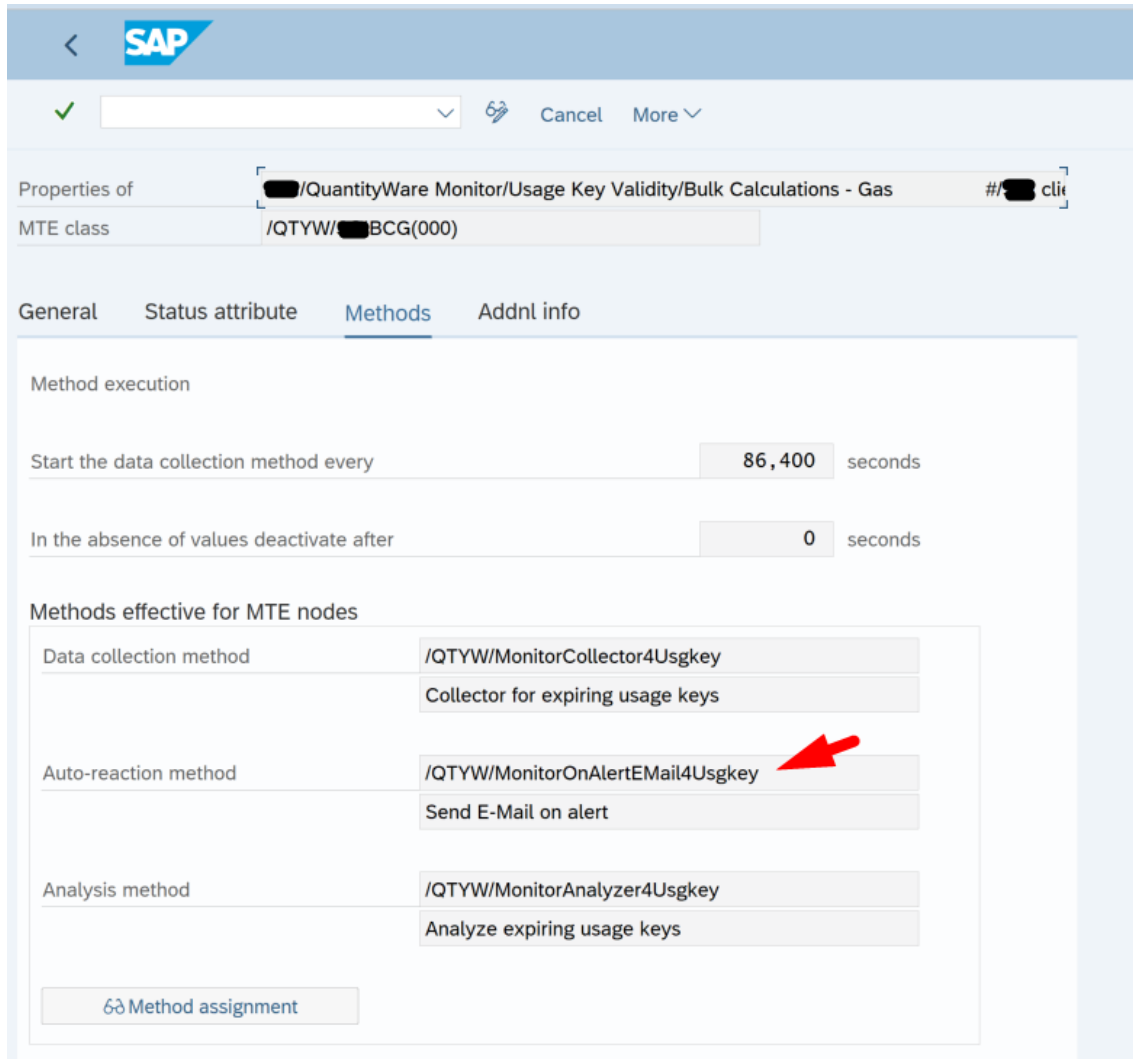
Parameter name Parameter value

1. SENDER <ADMINUSER> (in client 000)
2. RECIPIENT ABC:007:OPERATOR1
3. RECIPIENT-TYPEID R
4. TIME_ZONE <Time zone> (optional)

Explanation: For System (ABC), Client (007) and Recipient (OPERATOR1) for the recipient type “R”, which is a Remote Mail (RML) address.

In this case (SAP standard functionality), for each status node consumer, the SID and client information is concatenated and client-specifically, statically maintained in the status node.

When using the QuantityWare extension, the self-registration program registers the 'Auto-reaction method' /QTYW/MonitorAnalyzer4Usgkey, for all status nodes.



The screenshot shows the SAP monitoring configuration interface. At the top, there is a navigation bar with a back arrow, the SAP logo, and a search field. Below this, the current object is identified as 'Properties of [redacted]/QuantityWare Monitor/Usage Key Validity/Bulk Calculations - Gas # [redacted] cli'. The MTE class is '/QTYW/[redacted]BCG(000)'. The 'Methods' tab is selected, showing the following configuration:

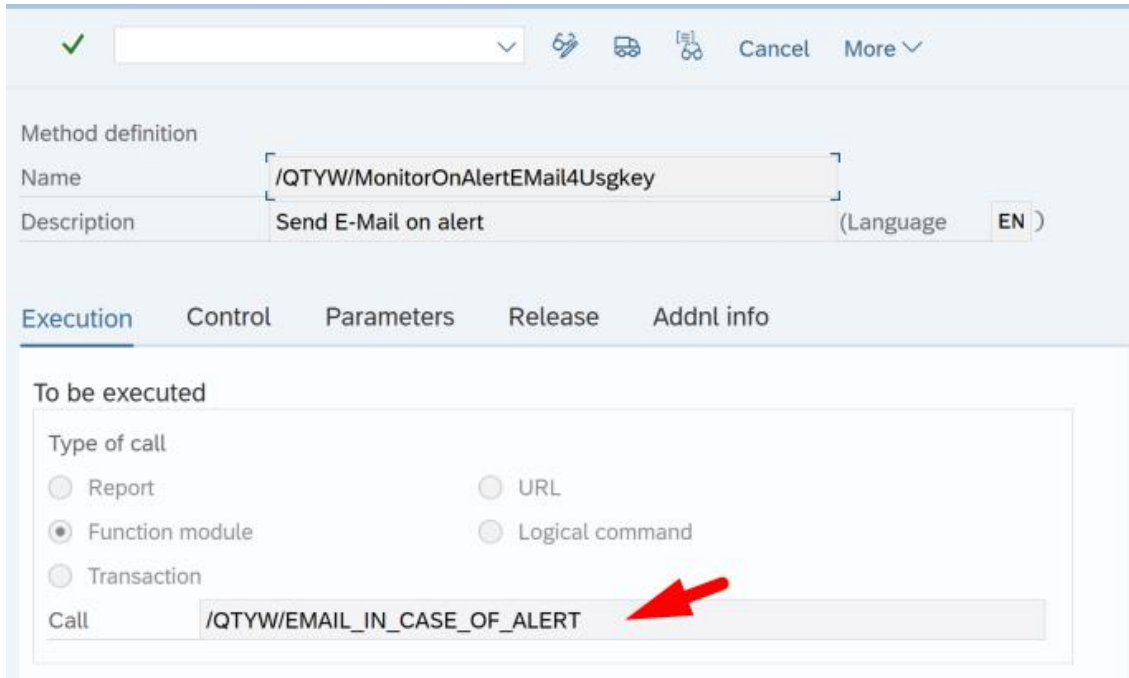
- Method execution:**
 - Start the data collection method every: 86,400 seconds
 - In the absence of values deactivate after: 0 seconds
- Methods effective for MTE nodes:**

Data collection method	/QTYW/MonitorCollector4Usgkey Collector for expiring usage keys
Auto-reaction method	/QTYW/MonitorOnAlertEMail4Usgkey Send E-Mail on alert
Analysis method	/QTYW/MonitorAnalyzer4Usgkey Analyze expiring usage keys

A red arrow points to the 'Auto-reaction method' entry. At the bottom left, there is a 'Method assignment' button.

You can navigate from the status node in the Monitoring Tree via 'Properties (Shift + F7)' and then double-click on the 'Auto-reaction method' details (previous screen shot), to reach the (alerting) Monitoring: Methods screen.

Here, all information relating to the new QuantityWare extension (function module) is listed...



Method definition

Name: /QTYW/MonitorOnAlertEMail4Usqkey


Description: Send E-Mail on alert (Language: EN)

Execution Control Parameters Release Addnl info

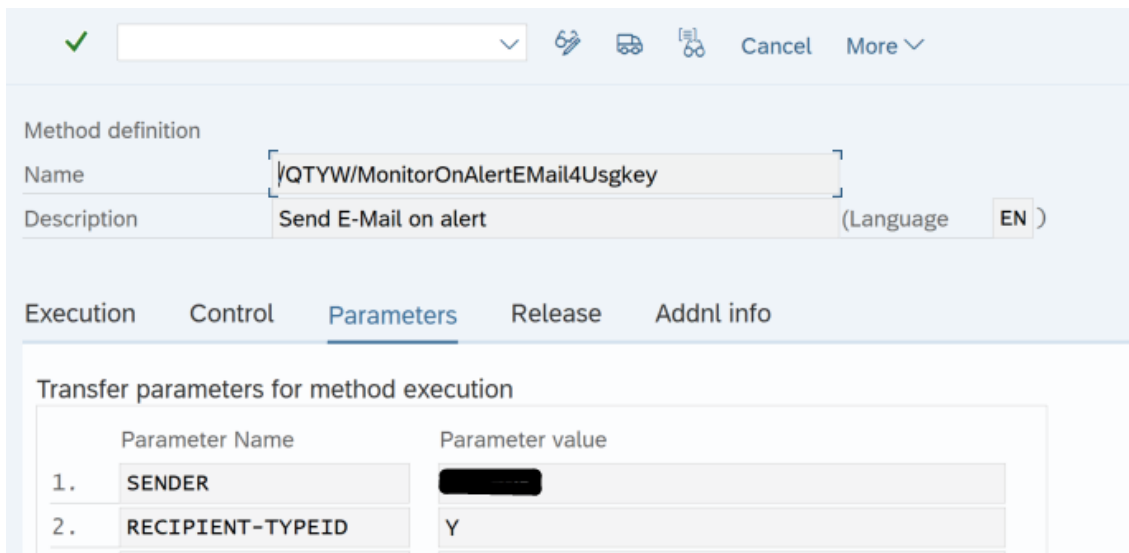
To be executed

Type of call

Report
 URL
 Function module
 Logical command
 Transaction

Call: /QTYW/EMAIL_IN_CASE_OF_ALERT 

... as well as the parameters passed by / for the module.




Method definition

Name: /QTYW/MonitorOnAlertEMail4Usqkey

Description: Send E-Mail on alert (Language: EN)

Execution Control **Parameters** Release Addnl info

Transfer parameters for method execution

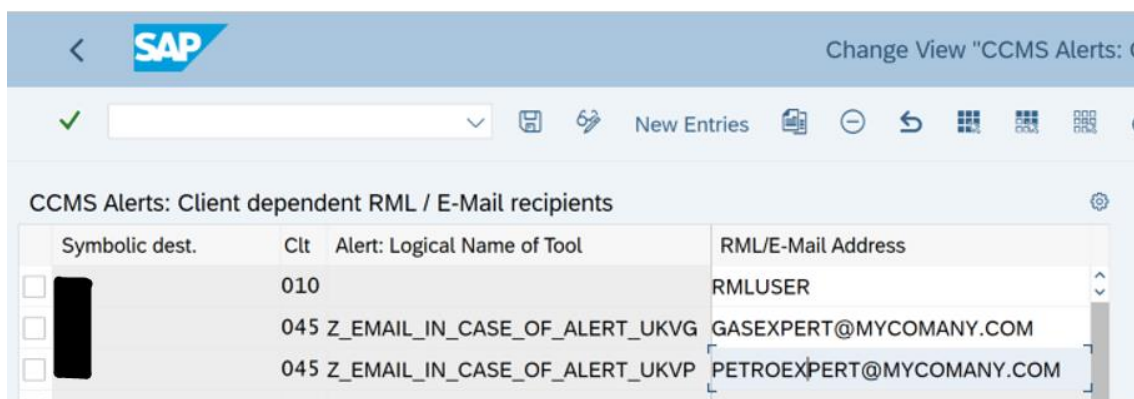
	Parameter Name	Parameter value
1.	SENDER	
2.	RECIPIENT-TYPEID	Y

You will find cross client - Client (All) - or client dependent client 045 status nodes in the monitor tree.

When calling function module /QTYW/EMAIL_IN_CASE_OF_ALERT with the RECIPIENT-TYPEID = Y we derive the symbolic destination, the client and the logical name of the auto-reaction method from the alert and determine the Remote Mail (RML) or E-Mail recipient from the view /QTYW/V_CCMSRCPT. The monitor tree description client (ALL) indicates a cross-client status node. Here you have the possibility either to use the SAP standard configuration and consequently function module SALO_EMAIL_IN_CASE_OF_ALERT_V2, or the QuantityWare version, which can send RML / E-Mails in a client configured node context of view /QTYW/V_CCMSRCPT.

In case you decide to use function module /QTYW/EMAIL_IN_CASE_OF_ALERT, please configure view /QTYW/V_CCMSRCPT using transaction SM30 accordingly.

The symbolic destination allows the customization of alerting rules in a central system to be distributed through the system landscape by the Transport Management System (TMS).



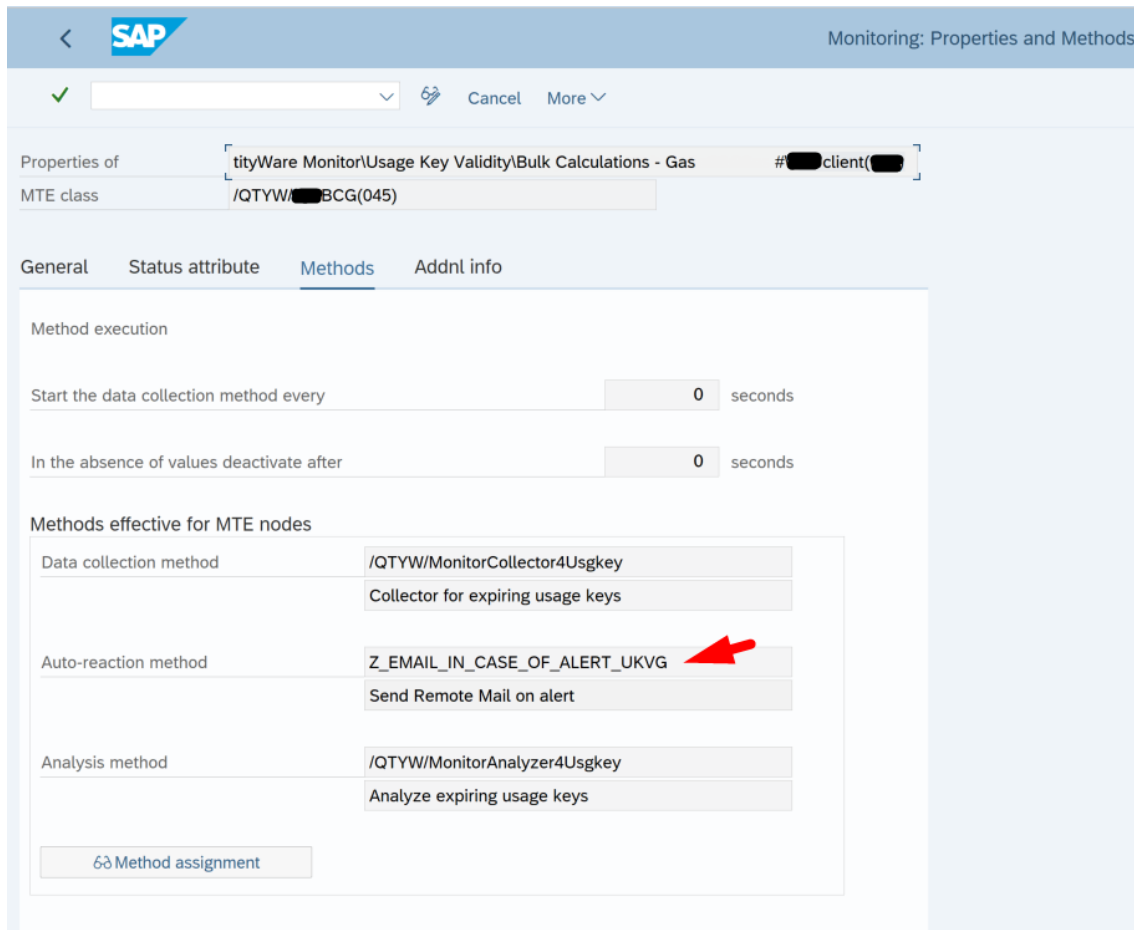
Symbolic dest.	Clt	Alert: Logical Name of Tool	RML/E-Mail Address
<input type="checkbox"/>	010		RMLUSER
<input type="checkbox"/>	045	Z_EMAIL_IN_CASE_OF_ALERT_UKVG	GASEXP@MYCOMANY.COM
<input type="checkbox"/>	045	Z_EMAIL_IN_CASE_OF_ALERT_UKVP	PETROEXP@MYCOMANY.COM

Field "Alert: Logical Name of Tool", purpose:

If you differentiate between oil & gas business experts as "alert recipients", you must customize different 'Auto-reaction methods' e.g.:

- <...>EMAIL_IN_CASE_OF_ALERT_<UKV><G> (usage key validity Gas)
- <...>EMAIL_IN_CASE_OF_ALERT_<UKV><P> (usage key validity Petroleum)

The "Alert: Logical Name of Tool" of table /QTYW/CCMS_RCPT can be found in the auto-reaction method definition:



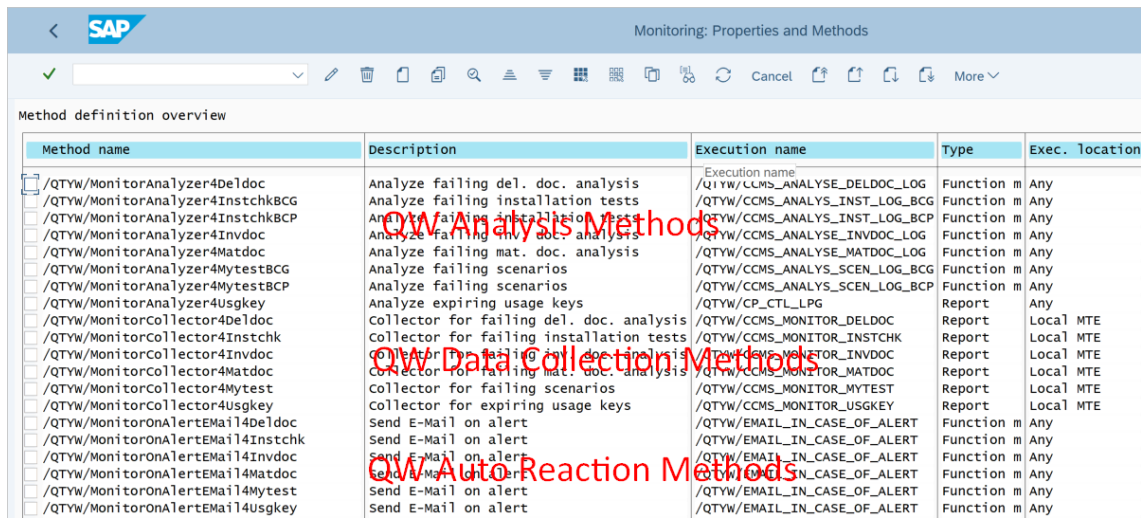
The screenshot shows the SAP Monitoring configuration interface. At the top, it says "Monitoring: Properties and Methods". Below that, there are tabs for "General", "Status attribute", "Methods", and "Addnl info". The "Methods" tab is selected. Under "Method execution", there are two input fields for time intervals, both set to "0 seconds". Below that, under "Methods effective for MTE nodes", there are three sections: "Data collection method" with "/QTYW/MonitorCollector4Usgkey" and "Collector for expiring usage keys"; "Auto-reaction method" with "Z_EMAIL_IN_CASE_OF_ALERT_UKVG" (highlighted with a red arrow) and "Send Remote Mail on alert"; and "Analysis method" with "/QTYW/MonitorAnalyzer4Usgkey" and "Analyze expiring usage keys". At the bottom left, there is a "Method assignment" button.

See chapter: E-Mail Alerting Configuration for a detailed description as to how E-Mail Alerting can be configured.

4. Architecture

4.1. Preamble:

We deliver the following predefined methods which can be viewed via transaction RZ21 -> Methods -> Definitions



Method name	Description	Execution name	Type	Exec. location
/QTYW/MonitorAnalyzer4DelDoc	Analyze failing del. doc. analysis	/QTYW/CCMS_ANALYSE_DELDOC_LOG	Function m	Any
/QTYW/MonitorAnalyzer4InstchkBCG	Analyze failing installation tests	/QTYW/CCMS_ANALYS_INST_LOG_BCG	Function m	Any
/QTYW/MonitorAnalyzer4InstchkBCP	Analyze failing installation tests	/QTYW/CCMS_ANALYS_INST_LOG_BCP	Function m	Any
/QTYW/MonitorAnalyzer4InvDoc	Analyze failing inv. doc. analysis	/QTYW/CCMS_ANALYSE_INVDOC_LOG	Function m	Any
/QTYW/MonitorAnalyzer4MatDoc	Analyze failing mat. doc. analysis	/QTYW/CCMS_ANALYSE_MATDOC_LOG	Function m	Any
/QTYW/MonitorAnalyzer4MytestBCG	Analyze failing scenarios	/QTYW/CCMS_ANALYS_SCEN_LOG_BCG	Function m	Any
/QTYW/MonitorAnalyzer4MytestBCP	Analyze failing scenarios	/QTYW/CCMS_ANALYS_SCEN_LOG_BCP	Function m	Any
/QTYW/MonitorAnalyzer4UsGkey	Analyze expiring usage keys	/QTYW/CP_CTL_LPG	Report	Any
/QTYW/MonitorCollector4DelDoc	Collector for failing del. doc. analysis	/QTYW/CCMS_MONITOR_DELDOC	Report	Local MTE
/QTYW/MonitorCollector4Instchk	Collector for failing installation tests	/QTYW/CCMS_MONITOR_INSTCHK	Report	Local MTE
/QTYW/MonitorCollector4InvDoc	Collector for failing inv. doc. analysis	/QTYW/CCMS_MONITOR_INVDOC	Report	Local MTE
/QTYW/MonitorCollector4MatDoc	Collector for failing mat. doc. analysis	/QTYW/CCMS_MONITOR_MATDOC	Report	Local MTE
/QTYW/MonitorCollector4Mytest	collector for failing scenarios	/QTYW/CCMS_MONITOR_MYTEST	Report	Local MTE
/QTYW/MonitorCollector4UsGkey	collector for expiring usage keys	/QTYW/CCMS_MONITOR_USGKEY	Report	Local MTE
/QTYW/MonitorOnAlertEMail4DelDoc	Send E-Mail on alert	/QTYW/EMAIL_IN_CASE_OF_ALERT	Function m	Any
/QTYW/MonitorOnAlertEMail4Instchk	Send E-Mail on alert	/QTYW/EMAIL_IN_CASE_OF_ALERT	Function m	Any
/QTYW/MonitorOnAlertEMail4InvDoc	Send E-Mail on alert	/QTYW/EMAIL_IN_CASE_OF_ALERT	Function m	Any
/QTYW/MonitorOnAlertEMail4MatDoc	Send E-Mail on alert	/QTYW/EMAIL_IN_CASE_OF_ALERT	Function m	Any
/QTYW/MonitorOnAlertEMail4Mytest	Send E-Mail on alert	/QTYW/EMAIL_IN_CASE_OF_ALERT	Function m	Any
/QTYW/MonitorOnAlertEMail4UsGkey	Send E-Mail on alert	/QTYW/EMAIL_IN_CASE_OF_ALERT	Function m	Any

4.2. Monitor Methods:

- Agent - the local ABAP agent is a program which creates the alerting event.
- Collector - a program which searches for the alerting event of the agent and triggers an alert in the CCMS alert monitor.
- Analysis - a report or function used to analyze the alerting event.
- Auto reaction - a function module used to inform the responsible recipient e.g., a business expert or GRC group, via a communications method outside of the standard CCMS transactions, e.g., e-mail.

4.3. The Agents

These are programs scheduled as background jobs in the clients to be monitored.

The agents are programs listed in the same order as in the CCMS monitor tree:

- The usage key does not require an agent, as this information is a runtime variable and therefore available to the collector.
- /QTYW/INSTALLATION_TEST
Measurement Cockpit: Run QuantityWare Installation Test.
- /QTYW/MY_TEST_R
Measurement Cockpit: Run My Scenarios.
- /QTYW/CCMS_CREATE_LOG_MATDOC
Alert Monitor: Persist the appl.log of the material document analysis.
- /QTYW/CCMS_CREATE_LOG_INVDOC
Alert Monitor: Persist the appl.log of the inventory document analysis.
- /QTYW/CCMS_CREATE_LOG_DELDOC
Alert Monitor: Persist the appl. log of the delivery document analysis.



The QuantityWare Usage Key expiry alert is a run-time object which requires no Agent. This is the most critical of all QuantityWare Alerts. Usage key expiry (formerly known as License Key) in a productive system will lead to serious business disruption!

4.4. Collector Methods

These are programs which are gathered within the self-registration program /QTYW/CCMS_MONITOR.

Each Monitor Tree Element (MTE) status node implements a topic-specific collector method executing the program listed in the same order as in the CCMS monitor tree:

- /QTYW/CCMS_MONITOR_USGKEY
Expiring usage keys in the SAP CCMS Monitor
- /QTYW/CCMS_MONITOR_INSTCHK
Failing installation tests in the SAP CCMS Monitor
- /QTYW/CCMS_MONITOR_MYTEST
Failing scenarios in the SAP CCMS Monitor
- /QTYW/CCMS_MONITOR_MATDOC
Failing material document analysis in the SAP CCMS
- /QTYW/CCMS_MONITOR_INVDOC
Failing invoice document analysis in the SAP CCMS
- /QTYW/CCMS_MONITOR_DELDOC
Failing delivery document in the SAP CCMS Monitor

4.5. Analysis Methods

The analysis methods display in RZ20 enables the administrator to select the alert in the MTE tree (with "F2"), receive detailed alert information and react (e.g.) by providing such information to the responsible person.

The analysis methods in corresponding order to the CCMS monitor tree are:

- Program /QTYW/CP_CTL_LPG
- Function /QTYW/CCMS_ANALYS_INST_LOG_BCG
- Function /QTYW/CCMS_ANALYS_INST_LOG_BCP
- Function /QTYW/CCMS_ANALYS_SCEN_LOG_BCG
- Function /QTYW/CCMS_ANALYS_SCEN_LOG_BCP
- Function /QTYW/CCMS_ANALYSE_MATDOC_LOG
- Function /QTYW/CCMS_ANALYSE_INVDOC_LOG
- Function /QTYW/CCMS_ANALYSE_DELDOC_LOG

4.6. Auto-Reaction Methods

Function /QTYW/EMAIL_IN_CASE_OF_ALERT is implemented allowing an RML recipient to be triggered **client specifically** (e.g., in a system in which differing business areas are assigned to individual clients). This function module is based on the SAP standard SALO_EMAIL_IN_CASE_OF_ALERT_V2, extended with a recipient type 'Y'. Using this recipient type, the system can derive the client from the MTE status node description.

To allow a configuration whereby specific RML / E-Mail addresses can be assigned to company roles for (e.g.) client-specific Gatekeepers or Governance Risk and Compliance monitoring users, recipient type 'Y' determines the client-specific recipient from the configuration view /QTYW/V_CCMSRCPT 'CCMS Alerts: Client dependent RML / E-Mail recipients'.

If a cross-client alert is triggered (indicated by "<SID> client '(ALL)'" (e.g., for the expiring usage key validity alert), only recipients in client '000' may be addressed.

4.7. Authorizations and Roles



Granting the authorizations below allows access to all QuantityWare monitors.

In case an access subset is required, you may use the following grouping assignments:

- Usage Key Validity (UKV)
- Installation Test (IT)
- My Test Scenarios (MTS)
- Business Document Analysis (BDA)

Authorization objects:

- (UKV) AUTHORITY-CHECK OBJECT 'Y_QWLICENS' ID 'ACTVT' FIELD '03'.
- (MTS);(IT) AUTHORITY-CHECK OBJECT 'Y_/QTYW/CO' ID 'ACTVT' FIELD '16'.
- (MTS);(IT) AUTHORITY-CHECK OBJECT 'Y_/QTYW/T' ID 'ACTVT' FIELD '16'.
- (MTS) AUTHORITY-CHECK OBJECT 'Y_QWTSTLG' ID 'ACTVT' FIELD '03'.
- (BDA) AUTHORITY-CHECK OBJECT 'Y_QWBUSOBJ' ID 'ACTVT' FIELD '03'.

We define three principal user “roles”, differentiating user responsibilities, requiring the above Authorization objects to be assigned respectively. We refer to QuantityWare and SAP-Standard roles in this text – these may have been replaced by customer-defined roles in your environment.

1. System Administrator - authorized to analyze system monitor alerts via transaction RZ20/RZ21 (authorization object S_RZL_ADM), use role SAP_BC_BASIS_MONITORING. The system administrator should generally have authorizations for technical and business analysis tools, as well as the ability to resolve QuantityWare alerts (e.g.) by applying a new usage key. To do so, use role Y_QTYW_CERTIFIED_CONSULTANT.
2. Gatekeeper / Business Expert – authorized to start business document analysis, use role Y_QTYW_EXPERT_BUSINESS_USER. As described in the example and to be able to receive remote mails via an MTE auto-reaction method, the Business Workplace transaction SWBP (authorization object S_OC_ROLE) along with the profile S_OC_ADMI ‘SAPoffice: Profile for Office administrator’ has to be considered.
3. QuantityWare Consultant – authorized to set up QuantityWare products, the composite role Y_QTYW_CERTIFIED_CONSULTANT is appropriate. In addition, to set up CCMS using transaction RZ20/RZ21 (authorization object S_RZL_ADM), the role SAP_BC_BASIS_MONITORING must be considered.

Additional authorizations that may be necessary should be considered for the following transactions:

- SA38 ‘ABAP Reporting’ to start self-registration report ‘/QTYW/CCMS_MONITOR’
- SE37 ‘ABAP Function Modules’ to be in a position to add (e.g.) auto-reaction methods
- SE01 ‘Transport Organizer’ to record changes into transports
- SICF ‘HTTP Service Hierarchy Maintenance’
- SOST ‘SAPconnect Send Requests’
- SCOT ‘SAPconnect – Administration’

5. Tips and Tricks

5.1. IMPORTANT: No Configuration Responsibility



QuantityWare provides its customers with the possibility to leverage the benefits of SAP CCMS. We do not provide support for issues stemming from SAP CCMS or the standard SAP functionality which is used in such scenarios. Specifically, we do not provide any form of consulting support via our service offerings for this area. If your organization encounters issues in the CCMS environment and its configuration, we request that you carefully analyze and consider which organization is responsible for, and should be contacted, in case of a perceived error.

5.2. E-Mail Alerting Configuration

Call transaction RZ21 □ Methods -> Methods assigned to MTE classes to determine the monitor node for which you intend to send an alert, e.g., an RML alert.

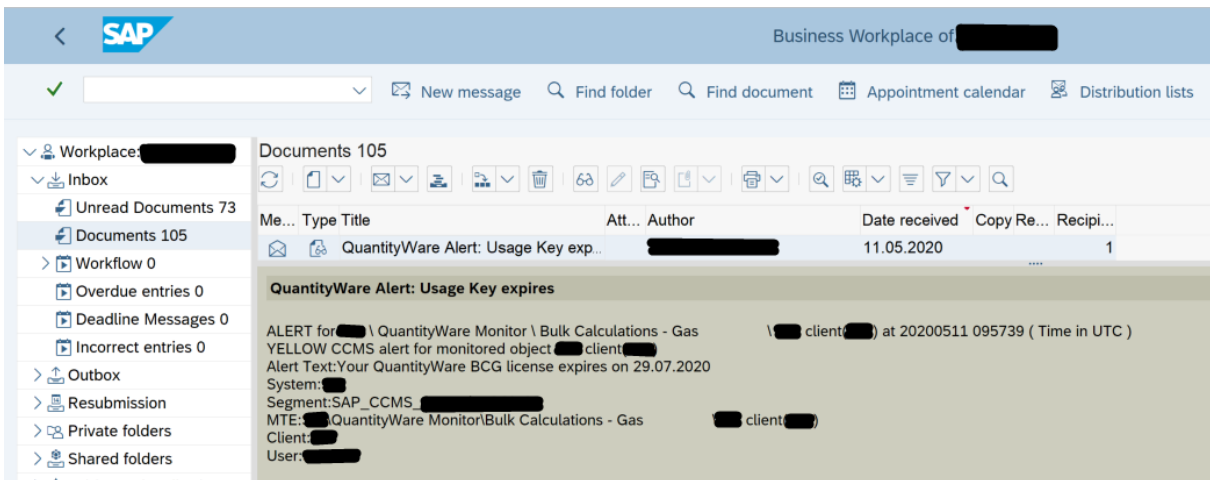
The class name reflects the node on the QuantityWare monitor you wish to select.

Example:

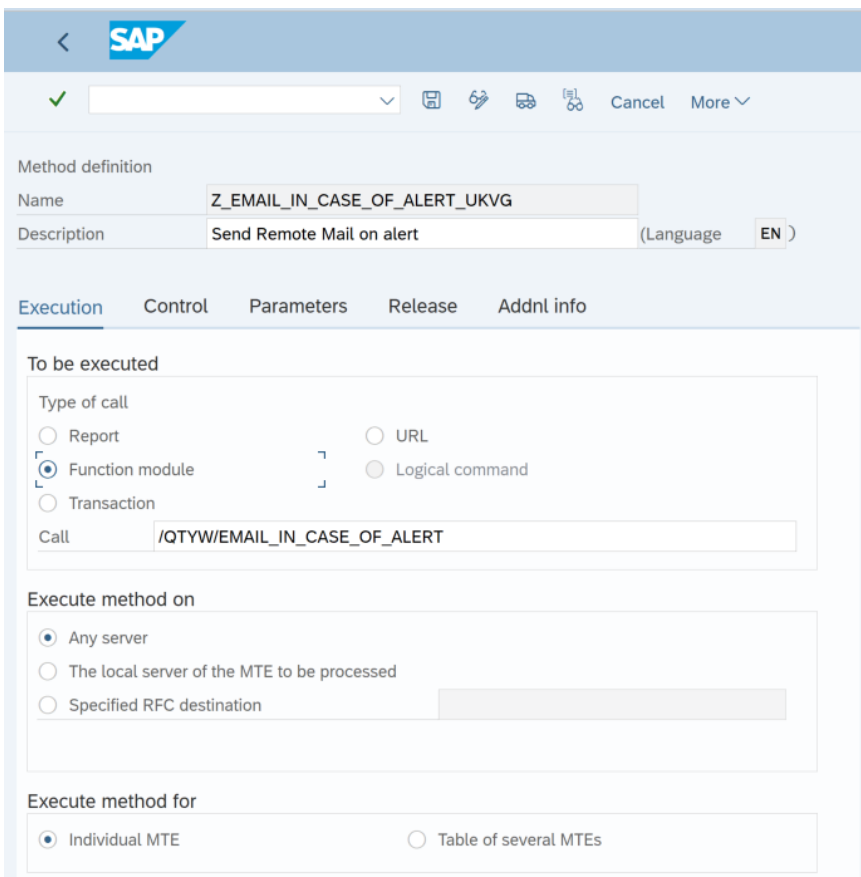
We would like to implement an RML alert for the 'Usage Key Validity'(UKV) verification of 'Bulk Calculations Gas'(BCG) and 'Bulk Calculations Petroleum' (BCP).

We use the suffix UKVG for 'Usage Key Validity' Gas; UKVP for 'Usage Key Validity' Petroleum as we have different business experts for Gas and Petroleum who require the alert. In our example we only implement BCG alerting, the same steps should be followed for BCP alerting.

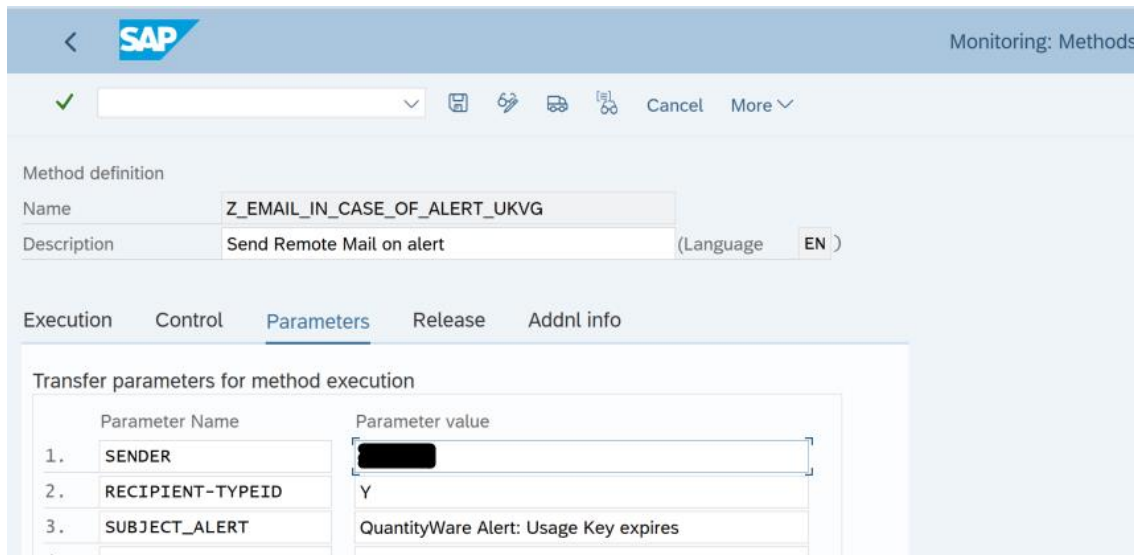
The RML alert is raised by an express document to the Inbox of the Business Workplace (transaction SBWP).



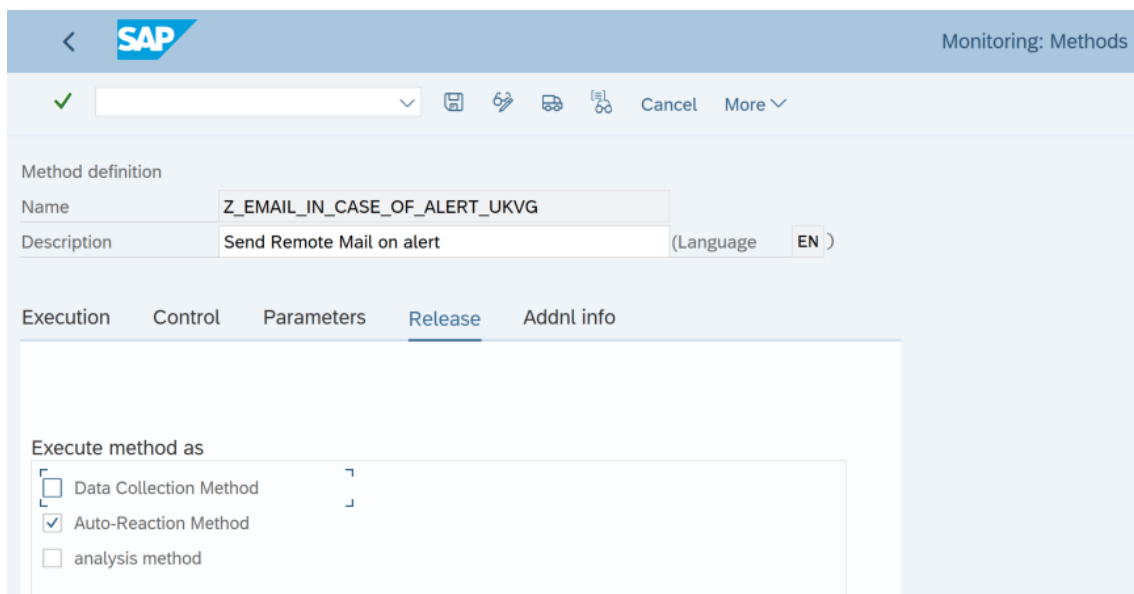
Copy the pre-delivered method definition /QTYW/MonitorOnAlertEMail4Uskey to a new name e.g. Z_EMAIL_IN_CASE_OF_ALERT_UKVG using transaction RZ21 -> Methods -> Definitions



On the 'Parameters' tab strip, verify the recipient type-id (TYPEID) and choose a representative alert subject.

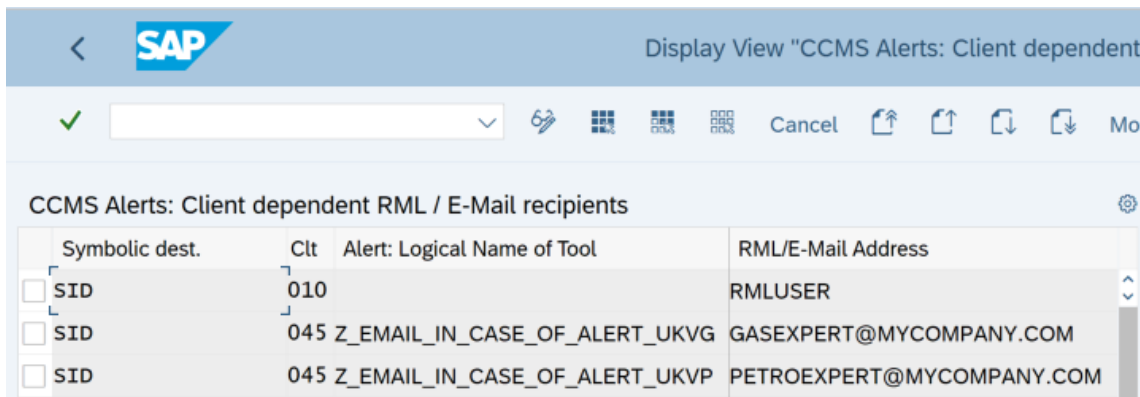


On the 'Release' tab strip release your method definition as Auto-Reaction Method.



...and save your settings.

Configure the recipients using transaction SM30 for view /QTYW/V_CCMSRCPT.



Display View "CCMS Alerts: Client dependent"

CCMS Alerts: Client dependent RML / E-Mail recipients

Symbolic dest.	Clt	Alert: Logical Name of Tool	RML/E-Mail Address
<input type="checkbox"/> SID	010		RMLUSER
<input type="checkbox"/> SID	045	Z_EMAIL_IN_CASE_OF_ALERT_UKVG	GASEXPERT@MYCOMPANY.COM
<input type="checkbox"/> SID	045	Z_EMAIL_IN_CASE_OF_ALERT_UKVP	PETROEXPERT@MYCOMPANY.COM

(In case you have a client information '(ALL)' in the monitor tree description of the 'Status attribute' node, client '000' should be used.)

Replace RMLUSER by the user who should be informed by remote mail, or if an E-Mail should be sent, by an appropriate company E-Mail address.

Add the alert method definition Z_EMAIL_IN_CASE_OF_ALERT_UKVG to the Monitor Tree Element.

Call transaction RZ20 and navigate to the 'Usage Key Validity' topic node. Activate the Maintenance Function from the menu via Extras -> Activate Maintenance Function.

Change the Auto-reaction method assignment of status nodes '<SID> client(<client>)' by navigating to their properties using the toolbar button 'Properties' (Shift+ F7).

In the properties choose the 'Methods' tab strip to navigate to the 'Method assignments':

SAP

✓ [dropdown] [icon] Cancel More ▾

Properties of [redacted]/QuantityWare Monitor/Usage Key Validity/Bulk Calculations - Gas # [redacted] cli

MTE class /QTYW/[redacted]BCG(000)

General Status attribute **Methods** Addnl info

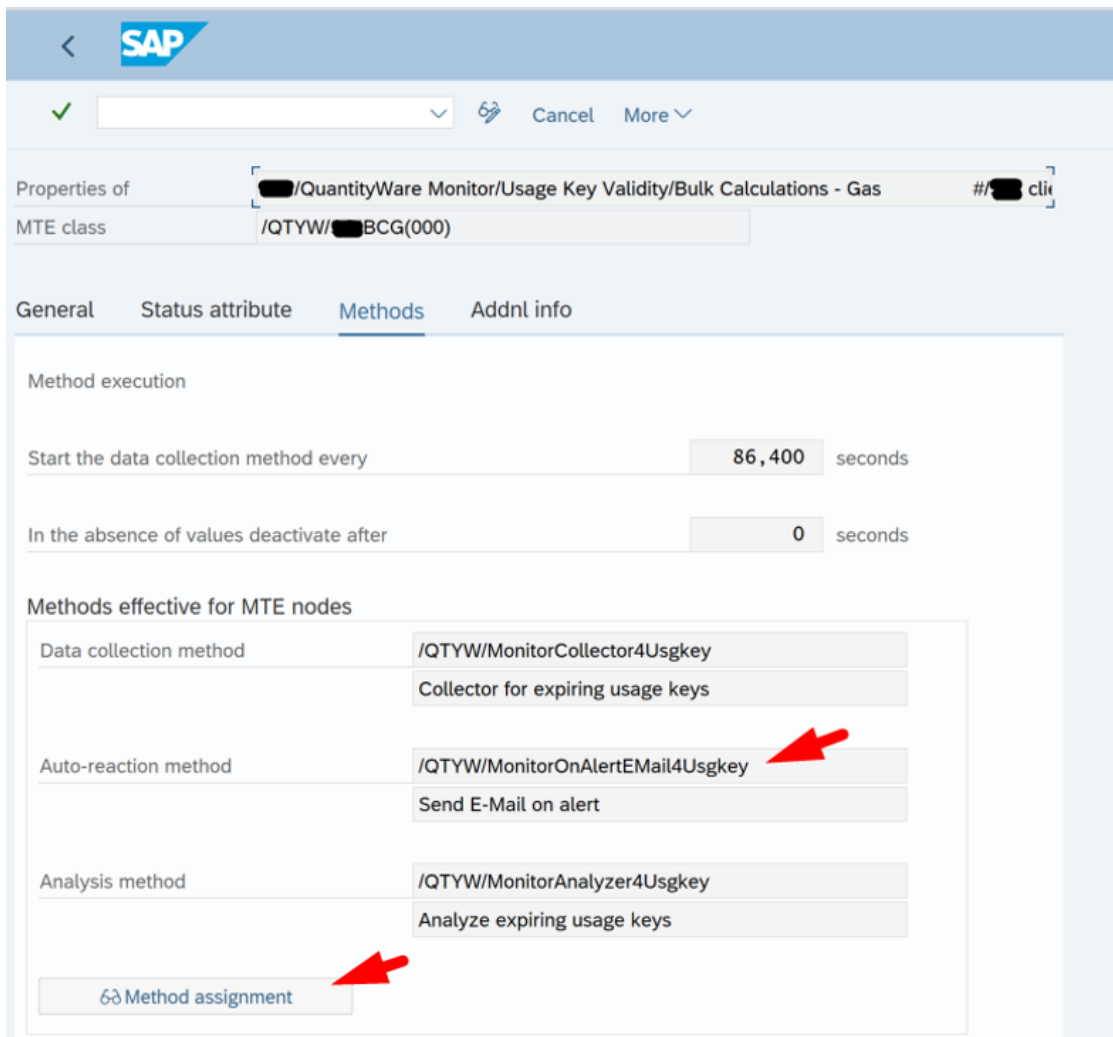
Method execution

Start the data collection method every seconds

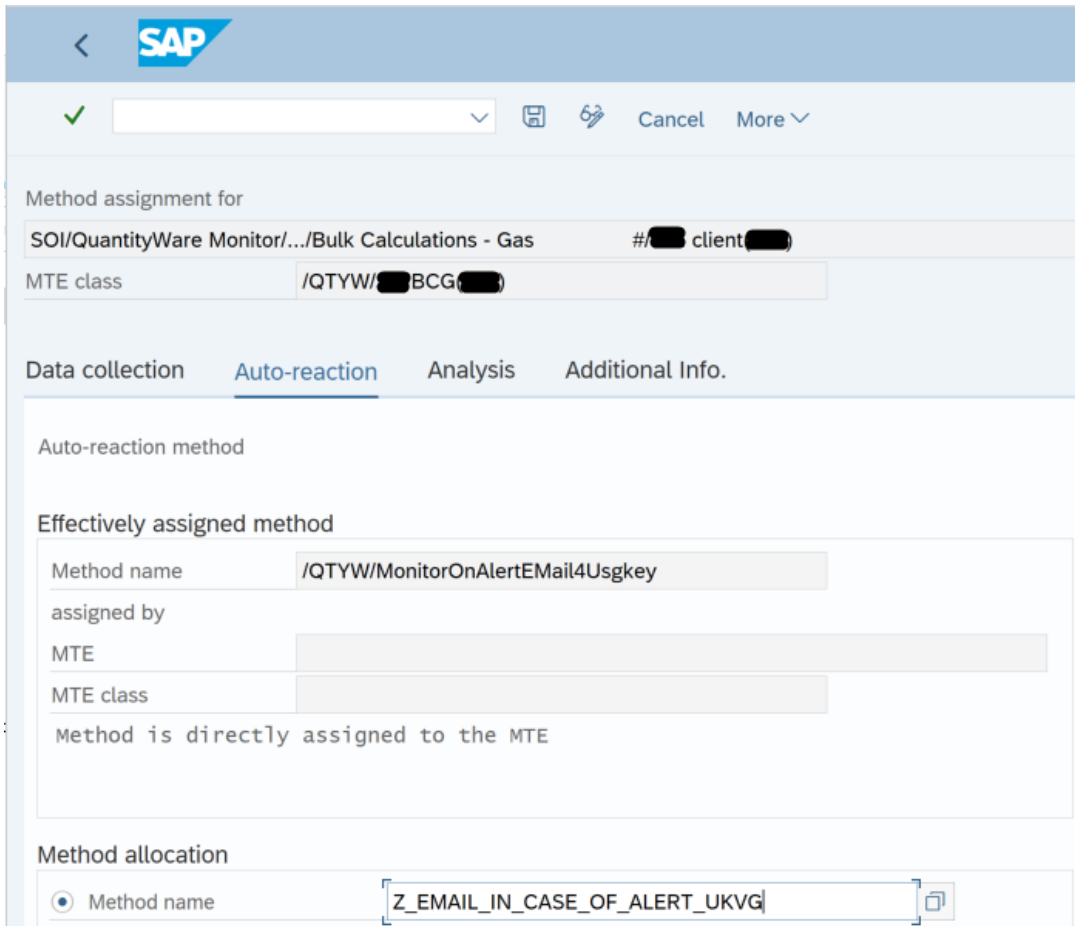
In the absence of values deactivate after seconds

Methods effective for MTE nodes

Data collection method	/QTYW/MonitorCollector4Usgkey Collector for expiring usage keys
Auto-reaction method	/QTYW/MonitorOnAlertEMail4Usgkey Send E-Mail on alert
Analysis method	/QTYW/MonitorAnalyzer4Usgkey Analyze expiring usage keys



In the Auto-reaction method assignment, toggle the 'Method allocation' from 'Use MTE class method assignment' to 'Method name' and enter your new alert method definition in our example Z_EMAIL_IN_CASE_OF_ALERT_UKVG.



The screenshot shows the SAP configuration screen for an MTE class. The 'Method assignment for' section is set to 'SOI/QuantityWare Monitor/.../Bulk Calculations - Gas' with client ID 'client'. The 'MTE class' is '/QTYW/BCG'. The 'Auto-reaction' tab is active, showing the 'Effectively assigned method' as '/QTYW/MonitorOnAlertEMail4Usgkey'. In the 'Method allocation' section, the radio button for 'Method name' is selected, and the value 'Z_EMAIL_IN_CASE_OF_ALERT_UKVG' is entered in the text field.

Save your changes to all variants as necessary.

Save Properties Individually for MTE

To which property variant do you want to copy the data?

Select one or more variants

	Name	Status	Description
<input checked="" type="checkbox"/>	*	Active	*-Variante (Kundendefault)
<input checked="" type="checkbox"/>	/QTYW/		QuantityWare

5.3. Define SAP Connect

We recommend the following third-party documentation. We are not responsible for implementation and the content of such documentation:

- RLM recipient:

Read the following SAP Note carefully.

[SAP note 176492 'Automatic email when an alert occurs \(RZ20\)'](#)

- E-Mail recipient:

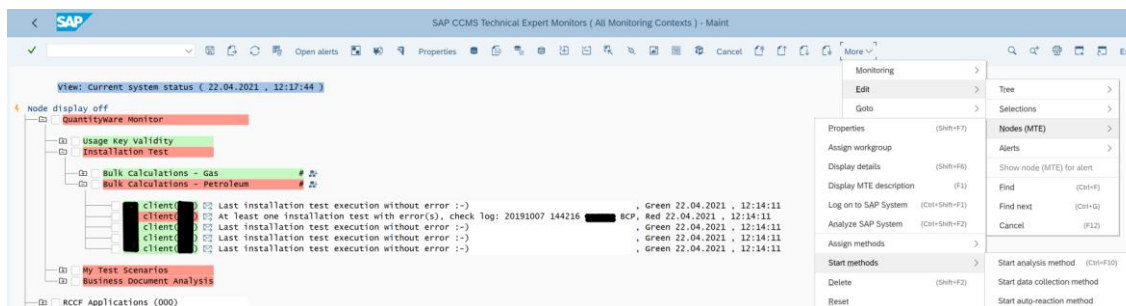
This source proved to be very useful during our internal configuration and testing.

<http://solidforms.de/en/create-an-smtp-connection-from-sap-to-office-365>

5.4. How to manually (re)start auto-reaction or analysis methods

From the alert detail in RZ20 use:

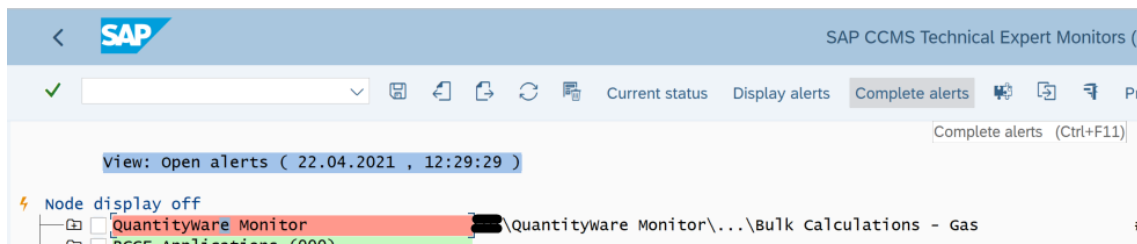
- Extras -> Activate maintenance function from the Alert Monitor menu first and
- Edit -> Nodes (MTE) -> Start methods subsequently:



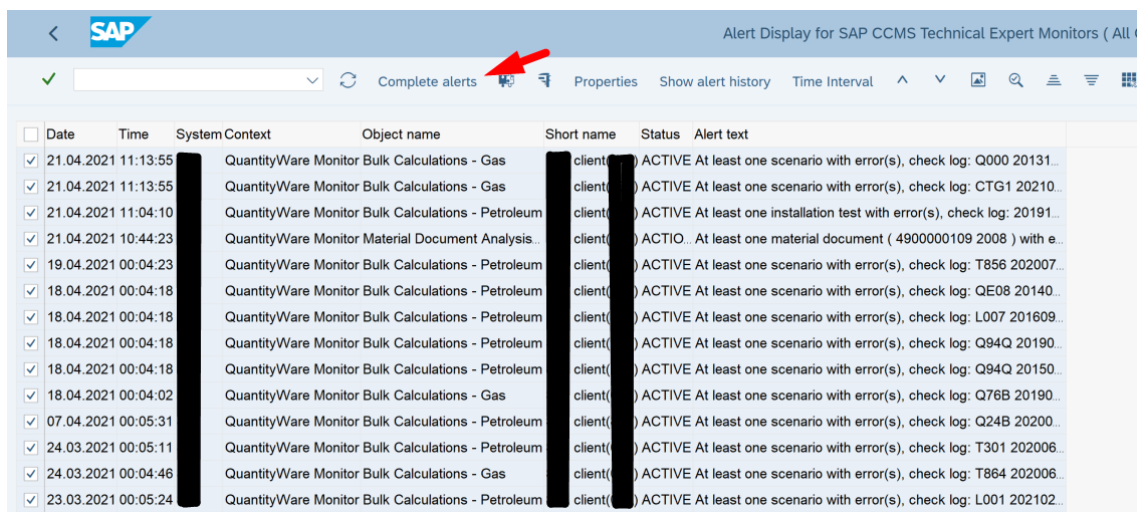
5.5. How to restart the QTYW CCMS installation from scratch

You would like to remove all alerts and nodes related to the QuantityWare Monitors by choosing the “ALL Contexts on Local Application” monitor.

Complete all alerts by “Complete alerts (Ctrl+F11)”



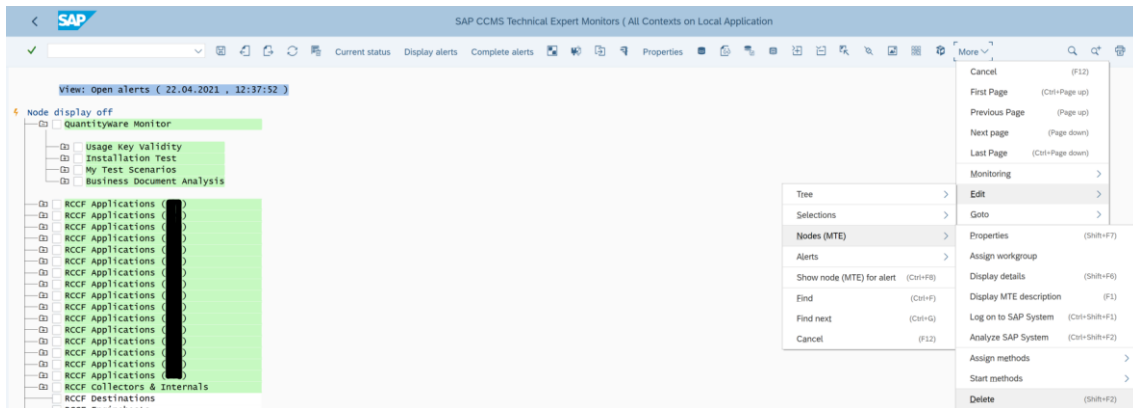
Confirm the tree node alert auto selection via “Complete alerts” from the alert details



Remove the QuantityWare tree from the Alert Monitor if necessary, or at a more granular level (e.g.) to delete a client node as the client itself has been deleted from the system.

From the alert detail in RZ20 use:

Extras -> Activate maintenance function from the Alert Monitor menu first, Mark the node and choose Edit -> Nodes (MTE) -> delete subsequently:



Choose an option, preferably option 2

(Consider all implications of a deletion, as this may affect other customer configuration)

☰
Note for "Delete Node" Operation
✕

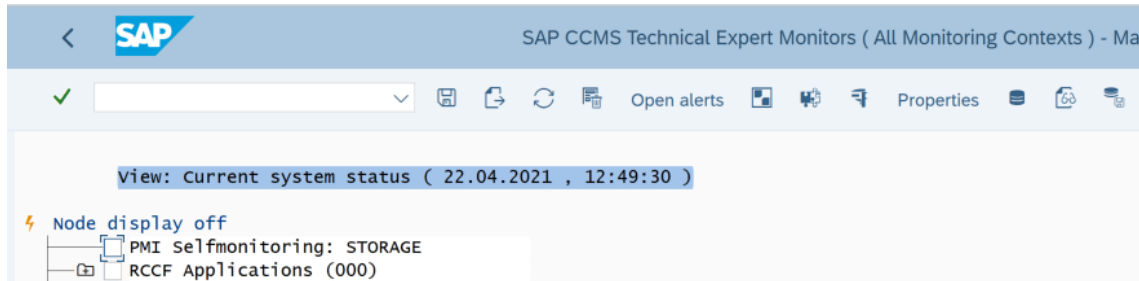
You have the following options for the **Delete Nodes** operation:

1. You want to remove the selected nodes from the display. To do this, you must change the node definitions appropriately. The nodes remain in the runtime environment.
2. You want to remove the selected nodes from the runtime environment, but keep the associated class properties for later use. The system deletes the nodes only if there are no more alerts for them, otherwise it marks the nodes for deletion.
3. You want to delete all nodes with their class properties in the respective systems. The system deletes the nodes even if alerts still exist.
4. In addition to the action in the last point, you want to delete all nodes with their class properties in the respective systems for which the MTE classes match one of the MTE classes in the subtrees below the selected nodes.

With each of these options, when you delete a node, you delete the

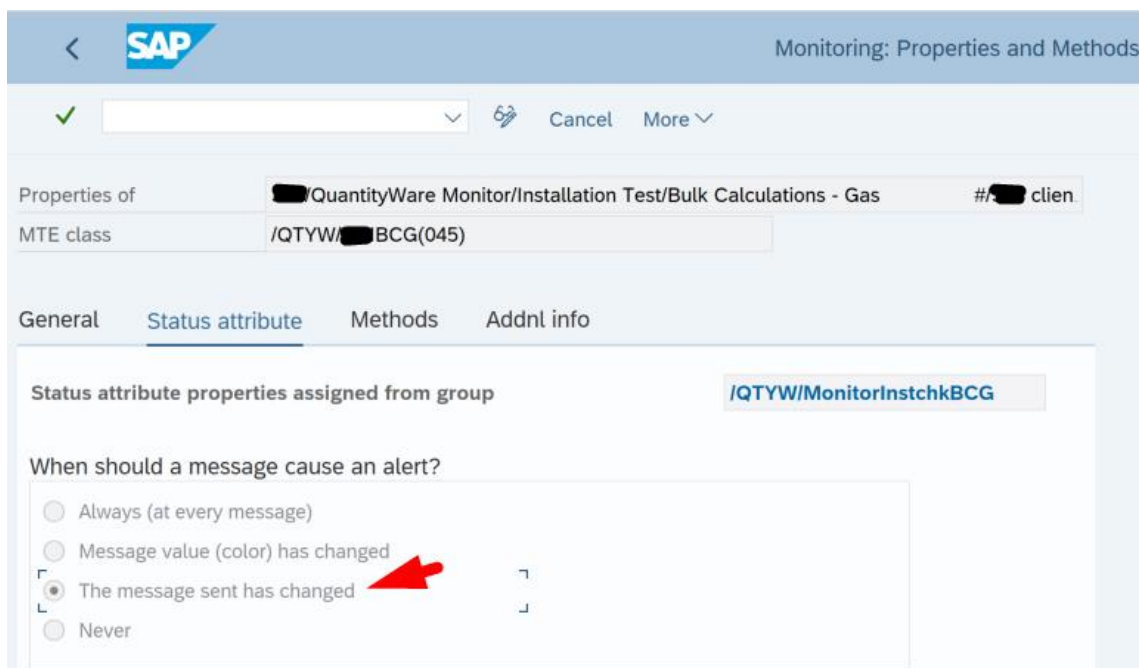
Option 1
Option 2
Option 3
Option 4
✕

Result – the QuantityWare node has been deleted from the Alert Monitor



(Re)run program /QTYW/CCMS_MONITOR to register the QuantityWare Alert Tree - Allowing the monitoring of QuantityWare alerts.

Please note, that all QW alerts (according to their properties [Shift+F7]) are only sent if “The message sent has changed” *.

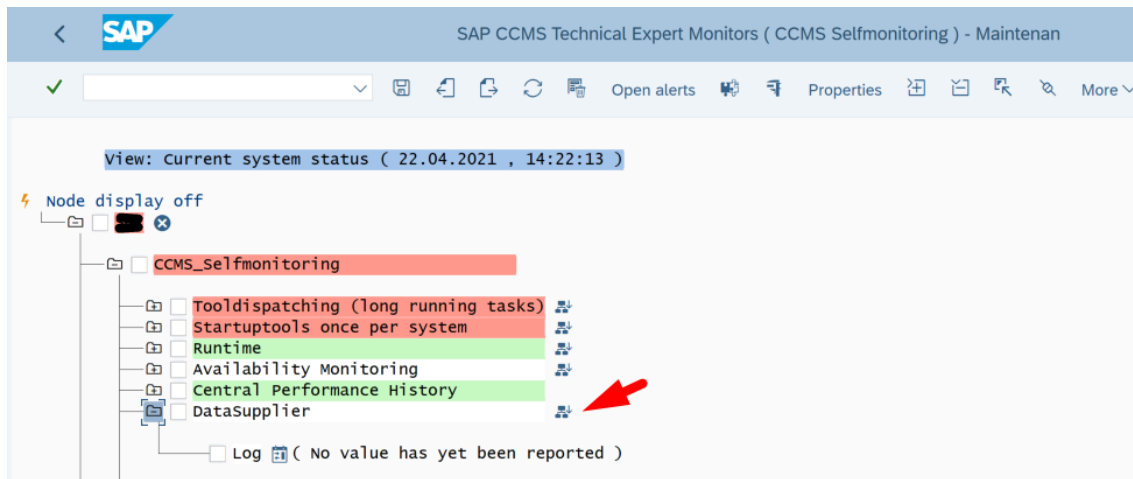


*Exception: Usage Key Monitor, where the configuration ‘Message value (color) has changed’ is valid.

You may check the status on the data collector (or the auto-reaction) from the Alert Monitor menu via Views -> Status Data Collector.

5.6. How to find a data collector's log / How to trace

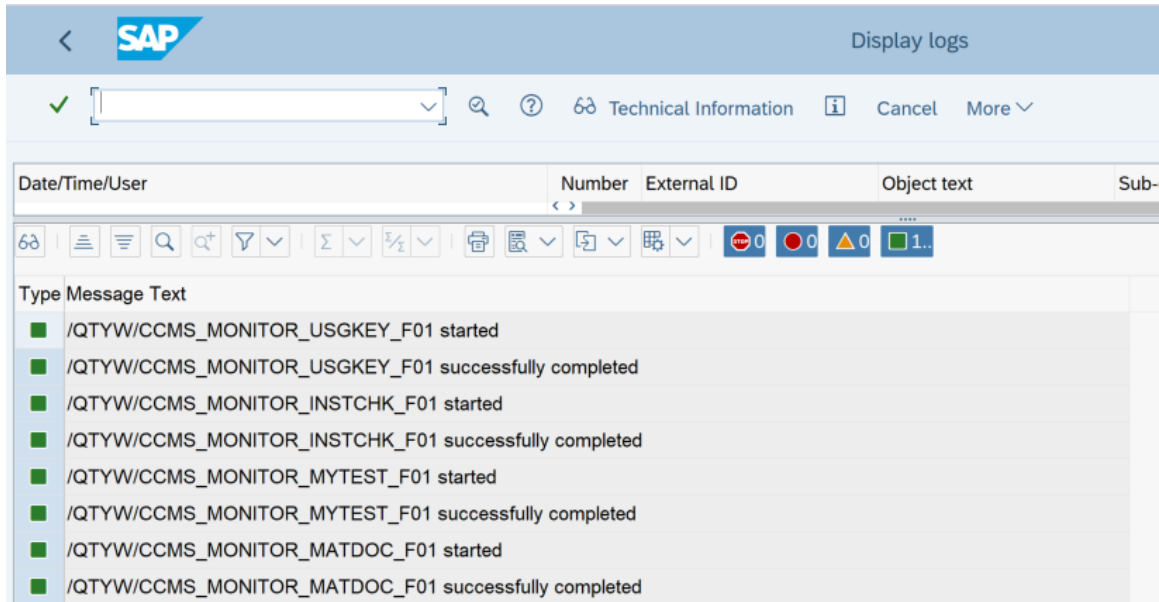
Executing the self-registration program (or a single data supplier program) does not return a successful execution message to the user per design as this information is written to the CCMS self-monitoring log.



As no information is displayed, we used a workaround as described in [SAP note 2259145: "CCMS: Extended selfmonitoring log \(Startup-Methods, Callstack of tools\)"](#) - setting the value of parameter SAPMSSY8_TRACE to '1' in customizing table ALCCMCUST, using transaction SM30.

When executing the self-registration program (or a single data supplier program) manually, the execution log is written to the application log.

To display, use transaction SLG1 'Analyze Application Log':



The screenshot shows the SAP SLG1 'Analyze Application Log' interface. The header includes the SAP logo and the title 'Display logs'. Below the header is a search bar with a green checkmark and a search icon. The main area displays a table of log messages with columns for Date/Time/User, Number, External ID, Object text, and Sub-.

Date/Time/User	Number	External ID	Object text	Sub-
			/QTYW/CCMS_MONITOR_USGKEY_F01 started	
			/QTYW/CCMS_MONITOR_USGKEY_F01 successfully completed	
			/QTYW/CCMS_MONITOR_INSTCHK_F01 started	
			/QTYW/CCMS_MONITOR_INSTCHK_F01 successfully completed	
			/QTYW/CCMS_MONITOR_MYTEST_F01 started	
			/QTYW/CCMS_MONITOR_MYTEST_F01 successfully completed	
			/QTYW/CCMS_MONITOR_MATDOC_F01 started	
			/QTYW/CCMS_MONITOR_MATDOC_F01 successfully completed	

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