

Autoquery Manager

Self Healing Software &
High Performance Reporting

Ceferino García
DENKFABRIK GmbH
Schaffhausen

Software Architect & Developer

Software Development is Handcraft

You want to...

1. Automatically retrieve data extracts
2. Create reports based on this data
3. Send reports to recipients
4. On regular intervals
5. Automatically

Solution:

Buy a reporting engine with a scheduler!

Day 1...

- ▣ You define...
 - thousands of queries
 - dozens of report types
 - Hundreds of report parameters
 - thousands of recipients

- ▣ And you glue them together
 - This is easy



Day 2...

- ▣ A query is deactivated
 - It is not executed any more
 - ▣ This is easy

- ▣ A recipient is deactivated
 - Find all the queries affected and remove the recipient
 - ▣ You have thousands of queries
 - ▣ This is not easy ???!

 - May be you will do these changes on day 3



Day 3...

- ▣ The data extraction logic for a query changes
From today on it displays *unblinded data*.
- Are all the predefined recipients allowed to see
unblinded data?
 - ▣ Find them and remove them



Day 4...

- ▣ One predefined recipient changes to a group...
... that is not allowed to see unblinded data 
- You have thousands of queries
- Which ones are retrieving unblinded data?
- The recipient must not get any reports!
 - ▣ Find all the queries affected and remove the recipient
 - ▣ This is definitely not easy !!! 

Day 5...

- ▣ You are removing inactive recipients
- ▣ You are checking queries for unblinded data
- ▣ You are removing recipients that are not allowed to see unblinded data
- ▣ You start thinking, whether it was a good idea to buy a reporting engine with a scheduler (??)

Day 6...

- ▣ Your number of active queries grows
- ▣ You need stronger servers...
... with more processors
- ▣ Your software license department tells you that you do not have budget to run your reporting engine on servers of the required size!
- ▣ You start missing timelines...
...because you cannot handle the load



Day 7

- ▣ You build a system of your own that...
 - Tracks the relationships between queries and active/inactive recipients
 - Detects whether recipients are allowed to see certain kind of data
 - Scales easily in an affordable way
 - Runs highly available 24 / 7
 - Automatically creates new instances of itself to replace unresponsive ones

Autoquery Manager

- ▣ Demo / Screenshots

Autoquery Details

The screenshot displays the 'Autoquery Manager' application window. The interface includes a top toolbar with icons for Refresh, Copy, New, Edit, Delete, Editstatus is Clean, Print Preview, Explore Autoqueries, Properties, Folders (QTT Folder, Test Folder, Production Folder), Status (Deactivate, Sign, View Signatures), and a menu bar with Autoquery, Runs, Tools, and View. The main area is divided into several panels:

- Filter:** A sidebar on the left showing a list of autoqueries. The 'Active' tab is selected, displaying a table with columns 'Active', 'QTT', and 'NAME'. The table lists three autoqueries: '888888 Cefi_Test_1', '888888 Cefi_Test_2', and '888888 Cefi_Test_3'. The first one is highlighted.
- Details:** A central panel showing the configuration for the selected autoquery 'Cefi_Test_1'. It includes fields for QTT (888888), Name (Cefi_Test_1), Frequency (Daily), Schedule, Do Not Run Before (02-Nov-2016), Requested By (Cefi), Requested On, and checkboxes for 'Run Only if Verified', 'Uses Unblinded Data', 'Ignore Datamart Upload', and 'Weekdays Only'. It also shows 'Valid only for MedDRA Version 14.1' and 'Categories' (Study).
- Output:** A panel on the right showing the output configuration, including Dataname (QTT888888_Cefi_Test_1), Datapath (..QTT888888_Cefi_Test_1), and Status (Active, Not Verified, Due). It also displays version information (4.086), creation/modification dates, and the last successful production run.
- Reports:** A panel on the far right showing the reports configuration, including a list of reports (Excel, ESR) and recipients (Garcia, Ceferino).
- Dependencies:** A panel at the bottom left showing dependencies for the autoquery.
- Parents:** A panel at the bottom center showing parents for the autoquery.
- Used by:** A panel at the bottom right showing the autoquery is used by 'QTT888888_Cefi_Test_2'.

The status bar at the bottom indicates the version (5.3.6341.19295 - Debug) and the user (arisc2.bas.roche.com / ops\$garcia8).

Specification & SQL

The screenshot shows the 'Autoquery Manager' application. The 'Specification & SQL' tab is active. On the left, the 'Data Criteria' section contains the following text:

Data Title: Cefi_Test_1

Data Criteria:

Generate reports X, Y and Z

for the following list of adverse events:

- ...
- ...
- ...

for this list of countries:

- ...
- ...

On the right, the 'SQL' editor contains the following code:

```
1 /*
2  This is my very complicated search logic.
3 */
4 select F1, F2, F3, F4
5 from MY_TABLE
6 order by F2, F3 desc;
7
8
```

A red double-headed arrow and a large red question mark are positioned between the 'Data Criteria' and 'SQL' sections, suggesting a transformation or mapping process.

Version: 5.3.6341.19295 - Debug | arisc2.bas.roche.com / ops\$garcia8

Compare Verified Versions

Signatures And Current Version

Version: 4.86*, 3.5, 2.76

01 <SIGNATURE_RECORD>
02 <AUTOQUERIES>
03 <ROW>
04 <ID>4053</ID>
05 <QTT>888888</QTT>
06 <VERSION_MAJ>3</VERSION_MAJ>
07 <VERSION_MIN>5</VERSION_MIN>
08 <NAME>Cefi_Test_111</NAME>
09 <USES_UNBLINDED_DATA_FLAG>N</USES_UNBLINDED_DATA_FLAG>
10 <FREQUENCY_ID>33</FREQUENCY_ID>
11 <FREQUENCY>Annually Apr 01</FREQUENCY>
12 <REQUESTER>Cefi</REQUESTER>
13 <DATANAME>Cefi_Test_12</DATANAME>
14 <DATAPATH>Cefi_Test_1</DATAPATH>
15 <DATA_TITLE>My Data Title: Cefi_Test_1</DATA_TITLE>
16 <CATEGORIES_SET>256</CATEGORIES_SET>
17 <IGNORE_QDBUPLOAD_FLAG>Y</IGNORE_QDBUPLOAD_FLAG>
18 <RUNONLYIF_VERIFIED_FLAG>Y</RUNONLYIF_VERIFIED_FLAG>

001 <SIGNATURE_RECORD>
002 <AUTOQUERIES>
003 <ROW>
004 <ID>4053</ID>
005 <QTT>888888</QTT>
006 <VERSION_MAJ>4</VERSION_MAJ>
007 <VERSION_MIN>86</VERSION_MIN>
008 <NAME>Cefi_Test_1</NAME>
009 <USES_UNBLINDED_DATA_FLAG>N</USES_UNBLINDED_DATA_FLAG>
010 <FREQUENCY_ID>1</FREQUENCY_ID>
011 <FREQUENCY>Daily</FREQUENCY>
012 <REQUESTER>Cefi</REQUESTER>
013 <DATANAME>Cefi_Test_1</DATANAME>
014 <DATAPATH>Cefi_Test_1</DATAPATH>
015 <DATA_TITLE>Cefi_Test_1</DATA_TITLE>
016 <CATEGORIES_SET>256</CATEGORIES_SET>
017 <IGNORE_QDBUPLOAD_FLAG>Y</IGNORE_QDBUPLOAD_FLAG>
018 <RUNONLYIF_VERIFIED_FLAG>Y</RUNONLYIF_VERIFIED_FLAG>

Signatures - Version 3.5

DEVELOPER Ceferino Garcia, DMG Responsible (Developer) on 23-NOV-2016 14:38:32
VERIFIER Lars Peter Andersen, Verifying 2nd Person on 23-NOV-2016 14:38:58

Signatures - Version 4.86*

View Signature Report Close View Signature Report

Reports & Recipients

Autoquery Manager

Autoquery Runs Tools View

Refresh Copy New Cancel Save Editstatus is Clean Print Preview Explore Autoqueries Properties QTT Folder Test Folder Production Folder Activate

Autoquery is not valid for verification! View Signatures

Filter

Autoqueries

Active Verified Due Distinct QTT

Active	QTT	NAME
		cefi
	888888	Cefi_Test_1
	888888	Cefi_Test_2
	888888	Cefi_Test_3

Details Specification & SQL Reports & Recipients Documentation Data Runs

Reports & Recipients

REPORT_TYPE	COMMENTS	DESCRIPTION	SERVICE_NAME	STAGING_AREA	SCRIPT
>	ESR	Extended Summary	BO	\\aris-fs.roche.com\sharp\ARIS\arisprd\dmg\AQ\output	
*					

Record 1 of 1

Report Parameters

PARAMNAME	DESCRIPTION	REPPARAM_VALUE
Subtitle	[Fretext], must not be empty (max 80 chars)	\$DATA_TITLE\$
Unblinded Products	'Yes', 'No'	Yes
Causality	'Yes', 'No'	REPPARAM_VALUE
Labeling	'Yes', 'No'	Yes
Reporter	'Yes', 'No'	No
Patient	'Yes', 'No'	

Show Hidden Parameters

Recipients

NAME	CC	SEND_IF_NO_DATA	ATTACH_REPORTS	MAY_SEE_UNBLINDED_FLAG	RECIPIENT_TYPE	ENCRYPT_EMAIL_FLAG	ONLY_FOR
>	Garcia, Ceferino						
*							

Record 1 of 1

Contains([NAME], 'cefi') Edit Filter

Frequencies

Categories

Version: 5.3.6341.19295 - Debug | arisc2.bas.roche.com / ops@garciac8

Tracking & Audit

Autoquery Manager

Autoquery Runs Tools View

Refresh Copy New Edit Delete Save Editstatus is Clean Print Preview Explore Autoqueries Properties QTT Folder Test Folder Production Folder Deactivate Sign View Signatures

Filter

Autoqueries

Active Verified Due Distinct QTT

Active	QTT	NAME
		cefi
	888888	Cefi_Test_1
	888888	Cefi_Test_2
	888888	Cefi_Test_3

Contains([NAME], 'cefi') Edit Filter

Frequencies Categories

Details Specification & SQL Reports & Recipients Documentation Data Runs

Total Runs = 57

Fetch Data automatically Fetch 10 Runs Request Abort

RUN_ID	AQ_ID	RUN_REQUEST_TYPE	STATUS_ID	STATUS	TEST_FLAG	VERIFIED_FLAG	RUN_CREATED_TS	RUN_COMPLETED_TS	DATA
1641031	4053	TEST	3	Running...	Y	N	11-Mai-2017 15:59:22	01-Jan-0001 00:00:00	11-M
1641018	4053	TEST	8	Success	Y	N	11-Mai-2017 13:48:19	11-Mai-2017 13:50:51	11-M

Reports Recipients

RUN_ID	AQ_ID	RECIPIENT_TYPE_ID	ADDRESS	NAME	CC_FLAG	SEND_IF_NO_DATA_FLAG	ATTACH_REPORTS_I
1641018	4053	11	ceferino.garcia@roche.com	Ceferino Garcia	N	Y	Y

RUN_ID	AQ_ID	RUN_REQUEST_TYPE	STATUS_ID	STATUS	TEST_FLAG	VERIFIED_FLAG	RUN_CREATED_TS	RUN_COMPLETED_TS	DATA
1641016	4053	TEST	8	Success	Y	N	11-Mai-2017 13:42:30	11-Mai-2017 13:45:51	11-M
1641013	4053	TEST	8	Success	Y	N	11-Mai-2017 13:23:06	11-Mai-2017 13:31:51	11-M
1641011	4053	TEST	9	Aborted	Y	N	11-Mai-2017 12:24:08	11-Mai-2017 12:37:51	11-M
1641010	4053	TEST	8	Success	Y	N	11-Mai-2017 12:20:48	11-Mai-2017 12:23:51	11-M
1641009	4053	TEST	8	Success	Y	N	11-Mai-2017 12:14:42	11-Mai-2017 12:16:51	11-M
1641008	4053	TEST	8	Success	Y	N	11-Mai-2017 11:40:41	11-Mai-2017 12:08:51	11-M
1641007	4053	TEST	8	Success	Y	N	11-Mai-2017 11:05:23	11-Mai-2017 11:38:51	11-M
1641004	4053	TEST	8	Success	Y	N	11-Mai-2017 10:50:19	11-Mai-2017 10:55:51	11-M

Version: 5.3.6341.19295 - Debug | arisc2.bas.roche.com / ops\$garcia8

Autoquery Agents

The image displays three overlapping screenshots of the AQAgents application interface, which is used for managing Autoquery Agents. The application window title is "AQAgents | RBAMW046156 - [PID]".

Top Window (PID 13352): Shows the "Agents" tab with "Local Agents" selected. It includes "Start", "Stop", and "Refresh" buttons. Below the buttons are tabs for "Local Agents", "Agent Requests", "Agent Servers Status", "DB Servers Status", and "Datamart Status".

Middle Window (PID 9820): Also shows the "Agents" tab with "Local Agents" selected. It includes the same buttons and tabs as the top window.

Bottom Window (PID 7420): Shows the "Agents" tab with "Local Agents" selected. It includes the same buttons and tabs as the top window. Below the tabs is a table with the following data:

Agent Instance Id	Agent Status	Agent Type	Autoquery	Autoquery Id	Jobs Id	Last Contact Time	Run Id
287861	Idle	AgentManager		0	0	12-Mai-2017 15:51:32	0
287862	Idle	DataRetrievalAgent		0	0	12-Mai-2017 15:51:55	0
287863	Idle	ExcelReportsAgent		0	0	12-Mai-2017 15:51:30	0
287864	Idle	EmailAgent		0	0	12-Mai-2017 15:51:27	0
287865	Idle	StandardReportsAgent		0	0	12-Mai-2017 15:51:32	0
287875	Idle	DataRetrievalAgent		0	0	12-Mai-2017 15:51:37	0

At the bottom of the bottom window, the version "5.3.6341.19295 - Debug" and the user "arisc2.bas.roche.com / dmg_user" are displayed.

And the lived happily ever
after

Thank you for your interest!

Questions?