

SAP GRC Process Control 2.5 How to create and execute ABAP Query for PC 2.5 Application

SAP GRC Regional Implementation Group

Applicable Releases:

SAP GRC Process Control 2.5

IT Practice : GRC GRC / Process Control IT Scenario : GRC / Process Control

1.00



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Document History

Description **Document Version**

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Typographic Conventions Icons

Type Style	Description	lcon
Example Text	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options.	
	Cross-references to other documentation	
Example text	Emphasized words or phrases in body text, graphic titles, and table titles	
Example text	File and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.	
Example text	User entry texts. These are words or characters that you enter in the system exactly as they appear in the documentation.	
<example text></example 	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.	
EXAMPLE TEXT	Keys on the keyboard, for example, F2 or ENTER.	

lcon	Description	
Δ	Caution	
	Note or Important	
~	Example	
t	Recommendation or Tip	



Table of Contents

1.	Intro	oductio	on	1
2.	Req	uireme	ent in ERP	1
	2.1	Prepa	ration for ABAP Query	1
	2.2	Creati	ing User Group	2
	2.3	Creati	ing InfoSet	2
	2.4	Creation	ion of ABAP Query	4
	2.5	Finaliz	zing the Query	7
3.	Req	uireme	ent in PC 2.5	8
	3.1	Check	<pre>< the Query</pre>	8
		3.1.1	Create RFC Destination in ERP System	9
		3.1.2	Create RFC Destination in PC 2.5 system	9
		3.1.3	Register Connector in R1B System	10
		3.1.4	Testing the Query	10
	3.2	Creati	ing the Rule in PC 2.5	12
	3.3	Contro	ol Rule Assignment	13
	3.4	Sched	duling and Verify the Result	14
		3.4.1	Results	15
3.6	Secu	rity		16
4.	Pros	s and C	Cons	17
	4.1	Tips		18
5.	Con	nments	and Feedback	19



1. Introduction

The SAP GRC Process Control application – part of a comprehensive set of SAP solutions for governance, risk, and compliance allows to automate the monitoring, testing, assessment, remediation, and certification of enterprise-wide business processes. The complete visibility can be gained into business process controls to ensure that they are operating as designed and the data also can be trusted to report to regulatory authorities. Automated Control takes the important role in monitoring the controls. SAP has delivered the out-of-box controls in the form of ABAP Script technically ABAP program in ERP system bundled as RTA (Real Time Agent). Still Customer used to have more requirements and that can be fulfilled by the ABAP Query functionality provided in PC 2.5 application.

This guide is not a replacement for SAP ABAP Query documentation or training material, but rather has been developed to provide a quick reference guide how to leverage the power of the tool in conjunction with SAP Business Objects Process Control 2.5

2. Requirement in ERP

2.1 Preparation for ABAP Query

GRC Process Control has the capability to help organizations to automate the effectiveness of the controls in ERP system. Although PC 2.5 has out-of-box delivered control, further control extension can be achieved by adopting the ABAP query functionality.

Although ABAP Query is a specialized skill, no program development experience respectively ABAP coding skills are required.

To determine the structure of reports in ABAP Query, users only have to understand the business requirement for monitoring controls and building a query in the ERP system.

There are three types of query reports like Basic lists, Statistics, Ranked lists are available now and those can be integrated with PC 2.5 for report output requirement. Preparation work for building a query needs good command over the three transactions 1) SQ01 - ABAP Query 2) SQ02 - InfoSet 3) SQ03 - User group



2.2 Creating User Group

First step in this process is to create a user group. The creation will be performed with transaction code SQ03. In our example a user group of "BPX_RIG_PC" is being created.

You can assign the users who will be able to see and execute the query by clicking on "Assign users and InfoSets"

User Grou	ps: Initial Scree	en			
	Additional functions				
User group	BPX_RIG_PC	0	Change		Create
		68	Display		Description
			Assign use	rs and In	foSets

Figure 2.1: User Group creation for PC 2.5 ABAP Query

2.3 Creating InfoSet

Second step in this process is to create an InfoSet, you can go to the transaction SQ02 and create an InfoSet as "ZBPX_RIG_PC_ISET".

InfoSet	: Initial Screen				
0 🖗 î	📔 🚱 🖶 Trash	Additional fun	ctions		
InfoSet	PREV RIG PC ISET		A	Change	Create
Intodet			Ø	Change	
			68	Display	Description
				Role/User Grou	ıp Assignment

Figure 2.2: Creating InfoSet

After entering the InfoSet text ",ZBPX_RIG_PC_ISET", you can Create the Info Set, a popup screen will open. You need to provide a small description about the Info set. And also you need to maintain the table join VBRK as mentioned below and continue with the next step.



🔄 InfoSet : Title and Data	ibase		×
Name	BPX RIG PC Info	Set	
Authorization group	ZBPX_RIG		
Data Source			
Table join using basis	table	<u>vbrk</u>	
O Direct read of table			
O Logical database			
Selection	screen version		
O Data retrieval by progr	am		
	Data structure	<u> </u>	
 Integra 	ited program		
O Extern	al program:		

Figure 2.3: InfoSet Description

In next screen, a new table can also be inserted by clicking on Insert table button on application toolbar. You can add VBRP as another table. You can find the join condition where you will be able to join the two tables with the primary key or other field relationships.

Inf	oSet: I	nitial Screen				
4	InfoSet	🖆 📴 🛅 🚼 Alias	36 J(conditio	ns 🛛 🖪	<u>Q</u> Q B
١	/BRK : Billin	n Document: Header Data			BRP : Billin	ng Document: Item Data
	Technical N	lam Long Text			Technical	Nan Long Text
∠₹	VBELN	Billing Document	-		VBELN	Billing Document -
	FKART	Billing Type		∠ ⊽	POSNR	Billing item
	FKTYP	Billing category	_		UEPOS	Higher-level item in bill of mate
	VBTYP	SD document category	_		FKIMG	Actual Invoiced Quantity
	WAERK	SD Document Currency	_		VRKME	Sales unit
	VKORG	Sales Organization	_		UMVKZ	Numerator (factor) for conve
	VTWEG	Distribution Channel	-	R	UMVKN	Denominator (Divisor) for Cor 🖵
_					1	

Figure 2.4: InfoSet Initial Screen

For maintaining the Infoset, click on InfoSet button. You will be able to provide the selection such as new empty field group as mentioned below.

🔄 Field Group Defaults	\boxtimes
Field groups	
O Include all table fields	
O Include key fields	
Oreate empty field groups	
k	

Figure 2.5: Field Group



Two empty field groups are created as shown in Figure 2.6. In the left pane, you can find the list of fields for both the tables VBRK and VBRP. You can manage the field selection by drag and drop functionality.



Figure 2.6: Field Group Selection and management

You can go to the Role/UserGroup Assignment to assign the InfoSet to a specific usergroup. Check the checkbox beside the user groups and Save to assign InfoSet to them. Here, ZBPX_RIG_PC_ISET is assigned to BPX_RIG_PC.

日日日					
nfoSet roles and user groups ZBPX_RIG_PC_ISET					
Assigned table	User group	User group name	Role	Role na	
 Image: A start of the start of	BPX_RIG_PC	BPX RIG PC User Group			
	JACKIE	Jackie's play ground			
	RKT_USR_GRP	RKT USER GROUP			

Figure 2.7: InfoSet assigned user group

2.4 Creation of ABAP Query

Last step in this process is to create a ABAP query, you can go to the transaction SQ01 and create a standard area query "ZBPX_GRCPC_Q1".

You can go to the screen utility and change the work area to standard area.

If a query is selected to be with Standard area, it can only be used in that specific client.

If a query is selected to be with Global area, it can be used cross client.

🗁 Work Areas	\times
Standard area (client-specific)	
O Global area (cross-client)	
Choose 🗶 Cancel	



Figure 2.8: Selecting the Work Area

After selecting the work area, you can create the Query.

Query from User Group BPX_RIG_PC: Initial Screen					
📽 🗈 😥 🛱 🖶 🕒 With variant 🕒 In background 🔗 Saved Lists Trash					
Query	ZBPX_GRCPC_Q1	Change	Create		
निः Quick Viewer	निः InfoSet Query	ଟେ Display	B Description		

Figure 2.8: Query Creation Screen

You can provide ZBPX_GRCPC_Q1 as Query Name and then proceed with the creation of the query. All the list of InfoSet will be displayed as shown in Figure 2.9 assigned to the user group (BPX_RIG_PC). Now you can select ZBPX_RIG_PC_ISET and proceed further.

🖌 🖂 🕅 🔀 🕷	🛙 🗐 📮 🗈 🛛 🍞 InfoSet se
InfoSet	Text
ZBPX_RIG_PC_ISET	BPX RIG PC Info Set

Figure 2.9: InfoSet Selection for Query

After selecting the InfoSet, you can go to initial selection of query creation screen. Here you can define the title as well as customize the number of pages and other print and output format details.

Create Query ZBPX_GRCPC_Q1: Title, Format

68	Basic List Statis	tics Ranked List Output sequence
Title	Query for test GRC PC	C - BPX community
Notes		
List format Lines Columns	20	Special attributes Standard variant Execute only with variant Change lock
Table forma Columns	200	Print list ✓ With staNdard title No. of characters left margin
Output forma	at Viewer t	O Display as table



Figure 2.10: Report Format

You can go to Next Screen to select the field groups that are to be used in your query. Please ensure that the checkbox Billing document: Header Data and proceed further with the next screen.



Figure 2.11: Field groups selection for Query

You can go to Next screen to select the list of fields required in the query.

Create Query ZBPX_GRCPC_Q1:

ß	🛃 🕼 🕮 Basic List Statistics Ranked Li:
Field	ls
	Billing Document: Header Data
	Material Number
	Text:Material Number
	County Code
	Text:County Code
v	Sales Organization
	Text:Sales Organization
	Net Value in Document Currency
	Fiscal Year
✓	Billing Type
	Text:Billing Type
	Billing Document

Figure 2.12: Choosing the Fields for Query

You can go to Next screen to choose which of these fields are to be select-options and parameters. Please make sure to check the checkbox before the fields and press Enter to make SV and 1Z input enabled. Please make sure to check checkbox SV - No intervals for select-option and also to check checkbox 1Z - No extensions for select-option.



С	reate Query ZBPX_GRCP	C_Q1: Selections		
6	Basic List Statistics	Ranked List		
	Do not use parameter IDs to preassign se	elections		
Se	lection fields			
		No Selection text	SV	1Z
	Billing Type	Billing Type		V
	County Code	County Code		
	Sales Organization	Sales Organization		
	Net Value in Document Currency	Net Value in Document Cur		
	Fiscal Year	Fiscal Year		
			1001000	

Figure 2.13: Choosing the Selection Fields

Here you can choose the sequence of fields that are displayed on selection-screen. After that you can go to the **Basic list** button on application tool bar. You should be familiar with the different toolbar options to explore about the feature of selections.

Query ZBPX_GRCP	C_Q1	ayout design				
🕮 Test 🏠 🕅 🔀 🚺	Ruler Al	l tools on/off 🛃 He	ader 🛃 Footer	Node	assignment	
Data fields List fie	····+	1+2	+3+	4+.		· +
□ Table join 6 □ □ □ □ □	CCd S	Org Net Value		Year Bill	🕵 Sort fields	
County Code ♥ Sales Organizat ♥ Net Value in Doc ♥	ABC 0	1001 2	.500,00	ABCD 9000		
Billing Type	Overa	ill Total 1	.702,80	•		
♥ Image: Billing Documer 1 Material Numbe ♥ ♥ Image: Additional Fields 0		Trash can				
Text:Material Nu 🛛 Text:County Cod 🗖	Tex	t:Material Number				

Figure 2.14: Query Layout Design

2.5 Finalizing the Query

Once the query is created, you can execute the query for its testing.

Query for test GRC PC - BPX community				
⊕ €				
Program selections				
Billing Type		to		
Sales Organization	0001	- ₽		

Figure 2.15: Test of the Query



In the selection option, "0001" sales organization is provided and it will generate the report for the same selection.

Qu	Query for test GRC PC - BPX community					
	🎎 🔂 🛃 🎞 🖬 🖬 ALV 📭 🞝 😰 🗐 📾 ABC EIS Selections					
CCd	SOrg	Net Value		Year	Bill.Doc.	Material
	0001	2.500,00 1.702,80	EUR EUR		90000000	8
	0001	2.675,00	EUR		90000002	8
0ve	rall tot	al				
		6.877,80	EUR	ĥ		

Figure 2.16: Query Output

In order to make the selection options for PC 2.5, you can create a variant so that it can be re-usable.

Variant catalog for	Variant catalog for program !QL4BPX_RIG_PC==ZBPX_GRCPC_Q1=				
Variant name	Variant name Short description				
Q1_SALES_001 Q1_SALES_001					
	ь.				

Figure 2.17: Variant Creation

How to generate the program code from the Query?

Now you can go to SQ01 and select the query **ZBPX_GRCPC_Q1**. From the menu options choose Query -> More functions -> Generate program

There is a specific naming convention to this program. It starts with AQZZ, continued by user group name, from seventeenth character Query Name starts and rest of the spaces are filled with '=' (equals).

WARNING – Please do not re generate the functionality after code is written in the ABAP Query program as it will reset to the original code, that means you will lose all your code.



Figure 2.18: ABAP Query Program Name

3. Requirement in PC 2.5

3.1 Check the Query



Whenever you build the Query in ERP system, you must check in PC 2.5 system that it has a target connector defined in the IMG section of PC 2.5. If no target connector defined in the PC 2.5 system then you can follow the below steps to create one. You should have administrator rights to create the connector in both R1B (PC 2.5 system) and VFA (ERP System).

3.1.1 Create RFC Destination in ERP System

You need to create a RFC ID in ERP system in order to establish a connection between and ERP and PC 2.5 system.

RFC Destination R1B_100						
Remote Logon Connection Test Unicode Test						
RFC Destination	RFC Destination R1B_100					
Description						
Description 1 R1B_100						

Figure 3.1: RFC Destination in ERP System

3.1.2 Create RFC Destination in PC 2.5 system

You need to create a RFC ID in PC 2.5 system in order to establish a connection between and ERP and PC 2.5 system.

Remote Logon C	connection Test Unicode Test 🦻	
RFC Destination	VFA	
Connection Type	3 ABAP Connection	Description
Description		
Description 1	VFA	
Description 2	VFA	
Description 3		
Administration	Tackpical Pattings Lagan 8 20	
Administration	Technical Settings Logon & Se	curity MDMP & Unicode Speci
Administration	Technical Settings Logon & Se	curity MDMP & Unicode Specia
Administration Target System Set Load Balancing S	Technical Settings Logon & Se	curity MDMP & Unicode Speci
Administration Target System Set Load Balancing S Load Balancing	Technical Settings Logon & Se bitings Status O Yes © No	curity MDMP & Unicode Speci
Administration Target System Set Load Balancing S Load Balancing Target Host	Technical Settings Logon & Settings tings Status O Yes No Idcivfa.wdf.sap.corp	curity MDMP & Unicode Speci System Number 77
Administration Target System Set Load Balancing S Load Balancing Target Host Save to Database	Technical Settings Logon & Se tings Status O Yes I No Idcivfa.wdf.sap.corp	curity MDMP & Unicode Specia

Figure 3.2: RFC Destination in PC 2.5 System



3.1.3 Register Connector in R1B System

You can go to the IMG settings in PC 2.5 system SPRO>GRC Process control and you can find more details in the screen below.

Displa	ay IMG					
8	Existing BC Sets & BC Sets for Activity & Activated BC Sets for A					
Structure						
▽ 🕞	SAP Customizing Implementation Guide					
B	/ 🕒 Activate Business Functions					
D	D SAP NetWeaver					
D	Cross-Application Components					
\bigtriangledown	GRC Process Control					
D	General					
D	Attributes					
D	Workflow					
D	Cases					
D	Planning and Scheduling					
D	Structure Setup					
D	User-Defined Fields					
\bigtriangledown	Assessment and Test					
	🛃 🤀 Specify Names for Ratings					
	🗟 🤂 Determine Entity-Level Controls: Necessity of Issue Reporting					
	🗟 🚯 Specify Aggregation for Entity-Level Control Group Rating					
	🛃 🤀 Specify Whether Review is Necessary					
	📑 🕀 Skip Review Depending on Rating					
	Automated Testing and Monitoring					
	🛃 🤥 Configure RFC Connectors					
	🛃 🤀 Maintain System Type					
	🛃 🤀 Register Connectors					
	D Rule					

Figure 3.3: IMG Setting in PC System

You need set up a connector entry for the source system and target connector. Here the target connector is the ERP system where the query has to be built and the source system is the PC 2.5 system and that is R1B System and the client in use is 100.

C	Change View "Connector Setup": Overview					
6	🎾 New Entries 👔 🖬 🕼 🖪 🖪					
	Connector Setup					
	System Type Target Connector Source Connector Default Target Connector					
	сс	CCPORT				
	SAP	J1E_100	R1B_100			
	SAP VFA R1B_100					

Figure 3.4: Register the Connector in PC 2.5 System

3.1.4 Testing the Query

You can test the query prior to be used in the automated test control monitoring. Path Evaluation Set up> Query



Query		
Find Queries		
Target Connector: * VFA	0	
Query Name: ZBPX*	User Group:	
Go Clear		
Select Query to Execute		
Query Name	User Group	Description
ZBPX_GRCPC_Q1	BPX_RIG_PC	Query for test GRC PC - BPX community

Figure 3.5: Query Test in PC 2.5 system

Here in PC 2.5, you have the provision to limit maximum number of rows for selection to avoid any performance bottleneck.

Query:Query f	or test	GRC PC -	BPX com
Target Connector: VFA	User Gro	up: BPX_RIG_PC	
Query Name: ZBPX_GRCPC Query Area: Standard Area	_Q1 Descripti	on: Query for test	GRC PC - BPX communit
Execute Query Cancel			
Query Criteria			
Max. Rows: 100			
Billing Type: 🔗 📃	To	\$	
	То	\$	

Figure 3.6: Query Selection Field in PC 2.5

The results are produced as follows in Figure 3.7.

Query Criteria	1					[
Print Version E	Export 🖌					Filter Settings
County Code 🗘	Sales Organization 🖨	Net Value in Document Currency 🗘	SD Document Currency 🖨	Fiscal Year 🕏	Billing Document	Material Number 🛛 🗘
	0001	2.500,00	EUR	0000000	009000000	0000000000000000000
	0001	1.702,80	EUR	0000000	009000001	00000000000000000008
	0001	2.675,00	EUR	0000000	009000002	00000000000000000008
	1001	500.000,00	EUR	0000000	009000003	BOOK

Figure 3.7: Query Result Output in PC 2.5



3.2 Creating the Rule in PC 2.5

Process Control 2.5 allows the SAP Standard programs and Custom programs monitoring approach in association with rule framework. These controls which are automated or semiautomated can be scheduled for monitoring or can be planned for compliance purpose. ABAP query also serves the purpose of monitoring any control in ERP system based on the query building process.

We are going to create a new Rule Script for the ABAP query as created earlier chapter 2.

Step 1 Login to the NWBC as XX-ICMAN and navigate to Evaluation Setup > Automated Test Rules > Script> Create.

Step 2

Select one of the Script type as Query and System Type as SAP, then select the Program name from the query look up button.

Script	
Save	
General Script Criteria	
Script Type: *	Query
Name: *	BPX_GRCPC_QUERY_SCRIPT
Description: *	Query for test GRC PC - BPX
System Type: *	SAP System 👻
Target Connector:	VFA 🗇
Script Category: *	Others
Program Name: *	/VFA/BPX_RIG_PC/ZBPX_GRCPC_Q1 Query Lookup
User Group:	BPX_RIG_PC
Query Area:	Standard area

Figure 3.8: Script Creation in PC 2.5

Next step is to create rule in PC 2.5 system.

- Step 1 Login to the NWBC as XX-ICMAN and navigate to Evaluation Setup > Automated Test Rules > Rule> Create.
- Step 2 Search for the **Script** created earlier
- Step 3 Please make sure to set the Rule status to 'Released', and then save the rule.



Rule						
Save Cancel						
General Rule	Parameters Attachments and	Links	3			<
Name: *	BPX_GRCPC_QUERY		Valid From: *	20.01.2009		17
Description: *	BPX USer - Query Rule		Valid To: *	31.12.9999		17
			Rule Group:			đ
		-	Rule Status: *	Released	-	
Script: *	BPX_GRCPC_QUERY_SCRIPT	D	System Type:	SAP System		
Script Description:	Query for test GRC PC - BPX community					
		•				
Script Type:	Query 💌					
Script Category:	Others 👻					
Target Connector:	VFA	đ				

Figure 3.9: Rule Creation in PC 2.5

3.3 Control Rule Assignment

Control-Rule Assignment for Query

- Step1 Login to the NWBC as XX-ICMAN and navigate to Evaluation Setup > Automated Test Rules>Control Rule Assignment.
- Step 2 Enter the Control name BPX* in the **Rule** field. You can use Wild characters.
- Step 3 Click the **Search** button.
- Step 4 Select the control O2C –one time customer.
- Step 5 Click the Assign the Rules to Selected Controls button.
- Step 6 Select the rule, then click **OK**.
- Step 8 Select the rule **BPX_GRCPC_QUERY** (in the lower pane), then click **Maintain Frequencies.**
- Step 9 Select the frequencies Monthly, for monitoring, then click OK.



Control Rul	le Assignment							
Contro	ol Rule As	signmen	t					
Control Rule	e Assignment							
Show Year	-	2009 - Go						
Organization:	c [D Process	Subprocess:	D C	ontrol:	ð		
Rule:	BPX*	Search						
Assign Rule	es To Selected Contr	ol						5
Control		Description		Organization	Process	Subproc	ess	Test Automation
O2C One	e-time customer high	Identifies sales	to a one-time customer exceeding a pre-es	Perf-PC25 Org BR	Sales Order Management	Process	Sales Orders	OSEM
						_		
						-		
A A A Ro	ow 1 of 1 ⊻ ≚ ≚							
Assigned R	ules and Frequenc	ies						
Maintain En								
Rule	Tremove	Rule	Description		Frequency		Monitoring	Compliance
- BPX_G	GRCPC_QUERY	BPX (JSer - Query Rule				J	
• BPX	_GRCPC_QUERY	BPX U	JSer - Query Rule		Annually			

Figure 3.10: Control Rule Assignment

3.4 Scheduling and Verify the Result

Scheduling - Query Control

- Step 1 Navigate to Evaluation Setup > Scheduling > Monitoring Scheduler.
- Step 2 Click Create Schedule
- Step 3 Give your job the name JOB Query 01.
- Step 5 Select a frequency of Monthly.
- Step 6 Enter the duration of one month in **Test Period From Test Period To** fields.
- Step 7 In the lower pane click Add.
- Step 8 Enter the Rule name **BPX_GRCPC_QUERY** in the rule **Name** field, then click **Search.**
- Step 9 Select the Control-Rule Combination, then click the **Down arrow**.
- Step 10 Clicks Add.
- Step 11 Select **Start Job** value **Immediate** to schedule the job immediately. Click **Schedule.**
- Step 12 As an option, navigate to **Evaluation Setup** > **Scheduling** > **Job Monitor** and view the scheduled job.



Monitoring Scheduler	
Scheduler	
Year v 2009 v Go Max. Rows 50 Go Create Schedule	
View [Standard View] Print Version Export Cancel lob Show Log	Filter Setting
Job Name Time Frame Year Date Created Time Created Created Created Created Created Created Created Created Created Created Created Created Created Created Created Created Created Created	eated By 👙 Changed On 👙 Changed Time 👙 Last Changed By 👙 Status
Hanitatian Fahadular	
munituring scheduler	
Create Schedule	
Transformer Mars 0000	
Job Name: * JOB_QUERY_01	
Frequency: * Annually Comment:	
Test Period From: * 01.01.2009	
Test Period To: * 31.12.2009	
Start Job: *	
Selected Controls	
Add Relitive	Dula Description Target Connector Variant Name
Perf-PC25 Org BR Sales Order Management Process Sales Orders O2C One-time customer high	h value sales BPX_GRCPC_QUERY_BPX_USer - Query_Rule_VFA
Rev 1 of 1 T T T	
٠	

Figure 3.11: Schedule the Job for Query

You can check the status of the Job as progress in the scheduler of PC 2.5 application for the ABAP query.

Sc	neduler															
Ye	Year V 2009 Co Max. Rows 50 Go Create Schedule															
Vie	w [Standard View]		 Print Vers 	ion	Export 4	Cancel Job Sho	w Lo	g								Filter Settings
	Job Name	⇔	Time Frame	⇔	Year 👙	Date Created	\$	Time Created	₿	Created By	\$	Changed On	\$ Changed Time	₿	Last Changed By	\$ Status \$
	JOB_QUERY_01		Year		2009	20.01.2009		02:05:53		GRCRIG		20.01.2009	02:05:53		GRCRIG	In Progress

Figure 3.12: Job in the Scheduler

You can check the status of the Job as completed in the scheduler of PC 2.5 application for the ABAP query.

Job	Monitor									?
Jo	b Monitor									
Ye	ar	▼ 2009 ▼ 0	30							
Job	Name:	JOB*	Frequenc	y:	 Target 	Connector:				
Exe	cution Date From earch	13.01.2009	Execution	Date To: 20.01.200	9 💼					
Vie	W [Standard View	V] - Print V	ersion Export	Rule Snapshot Org-	Level System Parameter	rs Snapshot				
	Job Name	Execution Date	Execution Time \$	Organization \$	Rule 🔤	Control 🗘	Frequency \$	Target Connector	Status 🗘	Total Except
	JOB_QUERY_01	20.01.2009	02:@hj56	Perf-PC25 Org BR	BPX_GRCPC_QUERY	O2C One-time customer high value sales	Annually	VFA	Completed	

Figure 3.13: Job Monitor

3.4.1 Results



Finally you can view the report of the job completion for the ABAP query in PC 2.5 application.

Result										
Rule:	BPX_GRCPC_QUER	Y	Organization:		Perf-PC25 Org E	BR				
Rule Description	BPX USer - Query Ru	Ile Organization Level System Param			Default OLSP					
Execution Date:	20.01.2009		Process:		Sales Order Management					
Execution Time:	02:05:56		Subprocess:		Process Sales C	orders				
Overall Status:	Review Required		Control:		O2C One-time c	ustomer high va	lue sales			
Total Exceptions	: 4		Target Connector:		VFA					
High:	0		Year:		2009					
Medium:	0	4	Timeframe:		Year					
Low:	0		Variant:		Not Applicable					
From Date:	01.01.2009		Frequency:		Annually					
From Date: To Date:	01.01.2009 31.12.2009		Frequency: Currency:		Annually NA					
From Date: To Date: Script Type:	01.01.2009 31.12.2009 Query		Frequency: Currency: Significant Amount:		Annually NA Not Applicable					
From Date: To Date: Script Type: Script Category:	01.01.2009 31.12.2009 Query Others		Frequency: Currency: Significant Amount:		Annually NA Not Applicable					
From Date: To Date: Script Type: Script Category: Details	01.01.2009 31.12.2009 Query Others		Frequency: Currency: Significant Amount:		Annually NA Not Applicable					
From Date: To Date: Script Type: Script Category: Details Print Version E	01.01.2009 31.12.2009 Query Others		Frequency: Currency: Significant Amount:		Annually NA Not Applicable			Filter Set	ting	
From Date: To Date: Script Type: Script Category: Details Print Version E County Code ≑	01.01.2009 31.12.2009 Query Others xport∡ Sales Organization \$	Net Va	Frequency: Currency: Significant Amount:	SD Docur	Annually NA Not Applicable ment Currency \$	Fiscal Year ≑	Billing Document ≑	Filter Set Material Number	tting	
From Date: To Date: Script Type: Script Category: Details Print Version E County Code \$	01.01.2009 31.12.2009 Query Others xport J Sales Organization ≑ 0001	Net Va	Frequency: Currency: Significant Amount: alue in Document Currency \$ 2.500,00	SD Docur EUR	Annuairy NA Not Applicable ment Currency ≑	Fiscal Year ≎ 0000000	Billing Document ≎ 009000000	Filter Set Material Number 000000000000000000000000000000000000	tting	
From Date: To Date: Script Type: Script Category: Details Print Version E County Code \$	01.01.2009 31.12.2009 Query Others xport ∡ Sales Organization ≑ 0001 0001	Net Va	Frequency: Currency: Significant Amount: alue in Document Currency \$ 2.500,00 1.702,80	SD Docur EUR EUR	Annualiy NA Not Applicable ment Currency ≑	Fiscal Year ≑ 0000000 0000000	Billing Document ≑ 009000000 009000001	Filter Set Material Number 000000000000000000000000000000000000	tting 200	
From Date: To Date: Script Type: Script Category: Details Print Version E County Code \$	01.01.2009 31.12.2009 Query Others xport J Sales Organization ≑ 0001 0001	Net Va	Frequency: Currency: Significant Amount: alue in Document Currency \$ 2.500,00 1.702.80 2.675,00	SD Docur EUR EUR EUR	Annualiy NA Not Applicable	Fiscal Year ≎ 0000000 0000000 0000000	Billing Document ≑ 009000000 009000001 009000002	Filter Set Material Number 000000000000000 00000000000000000000	tting 000 000	

Figure 3.14: Job details in PC 2.5 system

3.6 Security

User who is executing the ABAP query in PC 2.5 application should have the authorization as mentioned below. You can choose to assign the connector the user is entitled to run the Query or you can provide * to have all access to all connectors. This is applicable for ABAP query control in PC 2.5 application.

Change role: Authorizations	
🔄 🔁 💽 🗊 🛃 Selection criteria 🛃 Manual	y 🔁 Open 🔁 Changed 🖼 Maintained
Maint.: 0 Unmaint.org.levels	0 open fields, Status: generated
PC_QUERY_ROLE OOC PC Query R	lole
COC Manually Process Control	
🖵 🖂 🗐 🧟 Manually 🛛 Authorization	Object for Connector
🕒 🖾 🔂 Manually 🛛 Authorizatio	n Object for Connector
Activity	Execute
🛏 🥜 Target Connector	VFA

Figure 3.15: Security Assignment



End-users, system administrators, and translators must all be assigned the appropriate authorizations allowing them to work with the SAP Query. For example, end-users must not be authorized to maintain InfoSets. You can set up authorizations in such a way, that certain end-users in a user group are authorized to maintain and execute queries, while other members of the same user group are authorized only to execute existing queries.

In order to give individual users targeted, specific rights, the following options are available:

• Roles/user groups

A user has to be assigned to one or more role or user group before he or she is able to work with the *Queries* component.

This means that a user is able to access only those InfoSets assigned to the roles or user groups to which the user belongs.

• Authorizations

You can also use authorization object S_QUERY to assign authorizations to users.

It has the field ACTVT, in which the following values can be entered.

- Change (02)
- Maintain (23)
- Translate (67)

You can assign authorizations for each of these values.

Authorizations for the authorization object S_QUERY always refer to both work areas of the SAP Query. If a user is given authorization to change queries, he or she is able to create and change queries in all the user groups to which he or she is assigned in both the standard area and the global area.

Users who have authorization for the authorization object S_QUERY with both the values **Change** and **Maintain**, are able to access the queries in all the roles or user groups without being explicitly assigned to each of these roles or user groups.

User groups

The procedure for controlling access rights using user groups is exactly the same as with the SAP Query. This means that, per user group, you determine which InfoSets can be accessed and which users belong to a user group. Users allowed to create and change queries, must be given the 'change' authorization (authorization object S_QUERY, field *ACTVT*, value 02).

4. Pros and Cons



What can be done with ABAP Query

- Reporting Utilization of Query
- Utilization as monitoring control and compliance control
- Changes made for utilization as custom control
- Restricted the filter criteria for variant Query
- Combined org Level system parameter
- No RTA is required to schedule the ABAP query
- Testing can be done at target ERP system prior to automate the process
- Debugging and Query maintenance is easily possible.

What cannot be done with ABAP Query

- Needs manual intervention for the test evaluation results.
- You need to set up separate job for different ERP system for executing the ABAP query
- You cannot create ABAP query from PC 2.5 system rather you need to go to ERP system for the query creation
- Combined different ABAP query for all systems mentioned in OLSP in PC 2.5 system
- Limitation in the Scheduler to cancel or abort the running Query from PC 2.5 UI
- The deficiency rating has to be the same for all rule criteria in the rule. For example all will have the rating of Medium or High or Low or Review Required.

4.1 Tips

4.1.1 Performance

Response times depend largely on the type of system you have and the system load at the time, although the number of database accesses needed to process your query also plays a part. The actual processing of the data has virtually no effect on the runtime.

The InfoSet you choose determines the database to be evaluated. Each database has an associated selection screen which is automatically displayed when you start a query. Any selections you enter on this screen directly affect the response time. The more precisely you select your data, the shorter the response time will be.

From PC2.5, SAP queries can be accessed from the link Query in NWBC. User can also generate rule script from a query and assign the query rule script to a rule. Later user can use this rule to schedule job in the scheduler. User will need standard PC2.5 authorization (role/task) to display/execute SAP queries from Query and to schedule job with rule script generated from SAP query.

When SAP query is executed from Query or Job Scheduler, it uses a connector defined in PC2.5 which is a RFC destination defined for the SAP ERP system to connect to ERP system. The connector uses a user to logon to SAP ERP system. In ERP system, the SAP queries can be assigned to certain user group and users can be assigned to user groups.



5. Comments and Feedback

Both comments and feedback are very welcome. Please complete the following survey for this accelerator:

http://www.surveymonkey.com/s.aspx?sm=stdoYUIaABrbKUBpE95Y9g_3d_3d

For further questions, please send them to:

♣ Raj Behera RIG Manager <u>raj.behera@sap.com</u>

