

Cognos Write Back Capability- Integration of Cognos, SAS, MS SQL & ORACLE



Presenters:

Customer Analytic & Reporting Department – Issac Liu & Dipendra Pokhrel
TPMG Financial Service Department – Anjuleeca Acharya

Agenda

- ▶ Multiple ways to use Cognos - write back capability
- ▶ Use case 1: TPMG FS Cognos Write Back Demo
 - ▶ Integrate Cognos & MS SQL
- ▶ Use case 2: Customer Analytics & Reporting Department Write Back Demo
 - ▶ Integrate Cognos, Oracle & SAS
- ▶ Open question?

Cognos: Capability of Writing back to MS-SQL

**Presented by
TPMG Technical Support Department
Anjuleeca Acharya
Date: Sept 22, 2017**



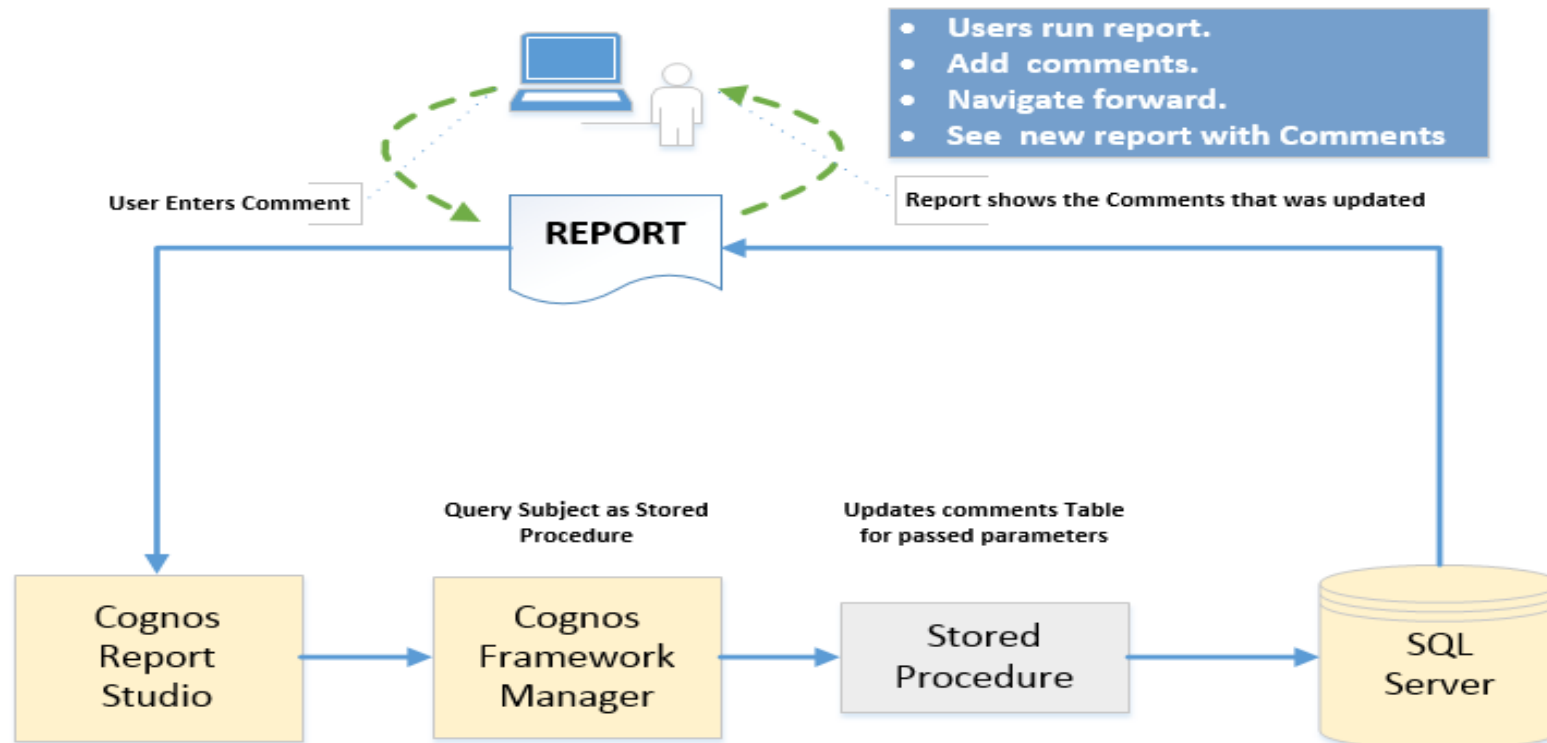
Use case 1:

Key business client had a need to capture and retrieve comments for data displayed on their Cognos report. The intent is that users who have done analysis on the report would enter their findings in a comments field which can be retrieved by those individuals in the future. In addition, other users can benefit since they will also see the history of comments on the report and prevent them from re-doing the same data analysis again.

Process Flow Diagram



COGNOS - CAPABILITY OF WRITING BACK TO MS-SQL SERVER



Note: Database connection ID requires Read-Write Access





Cognos Integration Step with MS-SQL Server

- 1) Create table in the database to store comments.
- 2) Write a Stored Procedure to insert comments.
- 3) Bring as Store Procedure Query subject in Framework manager Model & define parameter .
- 4) Create a source report with drill-thru in it.

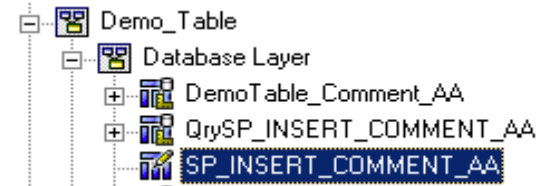
Store Procedure code in MS- SQL Server



```
USE [Demo_Table]
GO
/***** Object: StoredProcedure [dbo].[SP_INSERT_COMMENT_AA]    Script Date: 9/6/2017 2:57:16 PM *****/
SET ANSI_NULLS ON
GO
SET QUOTED_IDENTIFIER ON
GO
ALTER PROCEDURE [dbo].[SP_INSERT_COMMENT_AA]
(
    @YR_NB          char(4) ,
    @MTH_NB        char(2) ,
    @USERID        varchar(20) ,
    @COMMENTS      varchar(2000)
)
AS
BEGIN
    INSERT INTO dbo.Demo_Table_COMMENT_AA(YR_NB,MTH_NB, USERID,COMMENTS,CRTE_DT)
    VALUES (@YR_NB,@MTH_NB,@USERID,@COMMENTS,getdate());

    SELECT * FROM Demo_Table_COMMENT_AA
    ORDER BY crte_dt DESC;
END;
```


Framework Manager as Store Procedure



➤ Import Table as Store Procedure query subject at FM.

New Query Subject - Name and Type

Name: _____

Select the data that you want to use to define the Query Subject.

Model (Query Subjects and Query Items)
Build the query based on the data that exists in the model.

Data Source (Tables and Columns)
Manually build a SQL query using a single database source.

Stored Procedure
Execute a database stored procedure to build the query subject.

OK

Query Subject Definition - QrySP_INSERT_COMMENT_AA

Definition | Test | Query Information

Stored Procedure Name: SP_INSERT_COMMENT_AA Type: **Data Query** Data Source: Variance Analysis

Syntax:
PROCEDURE SP_INSERT_COMMENT_AA(:@YR_NB IN character, :@MTH_NB IN character, :@USERID IN character, :@COMMENTS IN character);

Argument Name	Mode	Type	Format	Value
@YR_NB	in	character	Size=10, Precision=4, Scale=0	?year?
@MTH_NB	in	character	Size=6, Precision=2, Scale=0	?mth?
@USERID	in	character	Size=42, Precision=20, Scale=0	?puid?
@COMMENTS	in	character	Size=4002, Precision=2000, Scale=	?pcomments?

Edit Argument

Parameter Name: @YR_NB Mode: in Type: character Size: 10 Precision: 4 Scale: 0

Value: ?year?

Insert Macro

➤ Parameter input need to define as prompt at FM.

Source Report

SQL Write Back Capability- Demo Report
Year/Month: 2014/JAN



Year	Month
2014	JAN

Region	Service Area	Product Name	Actual**	Variance	Comments
Region	Service Area	Optical Glass	12,345.00	10.00	Add Comments
		Product Name - Total	12,345.00	10.00	
	Service Area - Total		12,345.00	10.00	
Region - Total			12,345.00	10.00	
Overall - Total			12,345.00	10.00	

Comment Input Box to Enter the comments

Input your comments here

Demo for SQL write back capability

Next >

- You will get a comment input box to enter the comments

- Entered comments are inserted into database instantly & it will available to see comments you just entered along with history of other comments

THE PERMANENTE MEDICAL GROUP, INC.
Comments Input Report- Demo 2



Your Comment has been Saved.

Please click on "View Comment History" to see all the comments from the report selection incl current comment.

[View Comment History](#)

History of comment

THE PERMANENTE MEDICAL GROUP, INC.
Comments History Report- Demo Report 3
Year/Month: 2014 / JAN



Year	Month
2014	JAN

Year	Month	User ID	Comments
2014	01	A331704	Demo for SQL write back capability

Refresh the Source Report

THE PERMANENTE MEDICAL GROUP, INC.
SQL Write Back Capability- Demo Report
Year/Month: 2014/JAN



Year	Month
2014	JAN

Region	Service Area	Product Name	Actual**	Variance	Comments
Region	Service Area	Optical Glass	12,345.00	10.00	Demo for SQL write back capability Add Comments
		Product Name - Total	12,345.00	10.00	
	Service Area - Total		12,345.00	10.00	
Region - Total			12,345.00	10.00	
Overall - Total			12,345.00	10.00	

Comments you just entered will be available at source report once refresh.

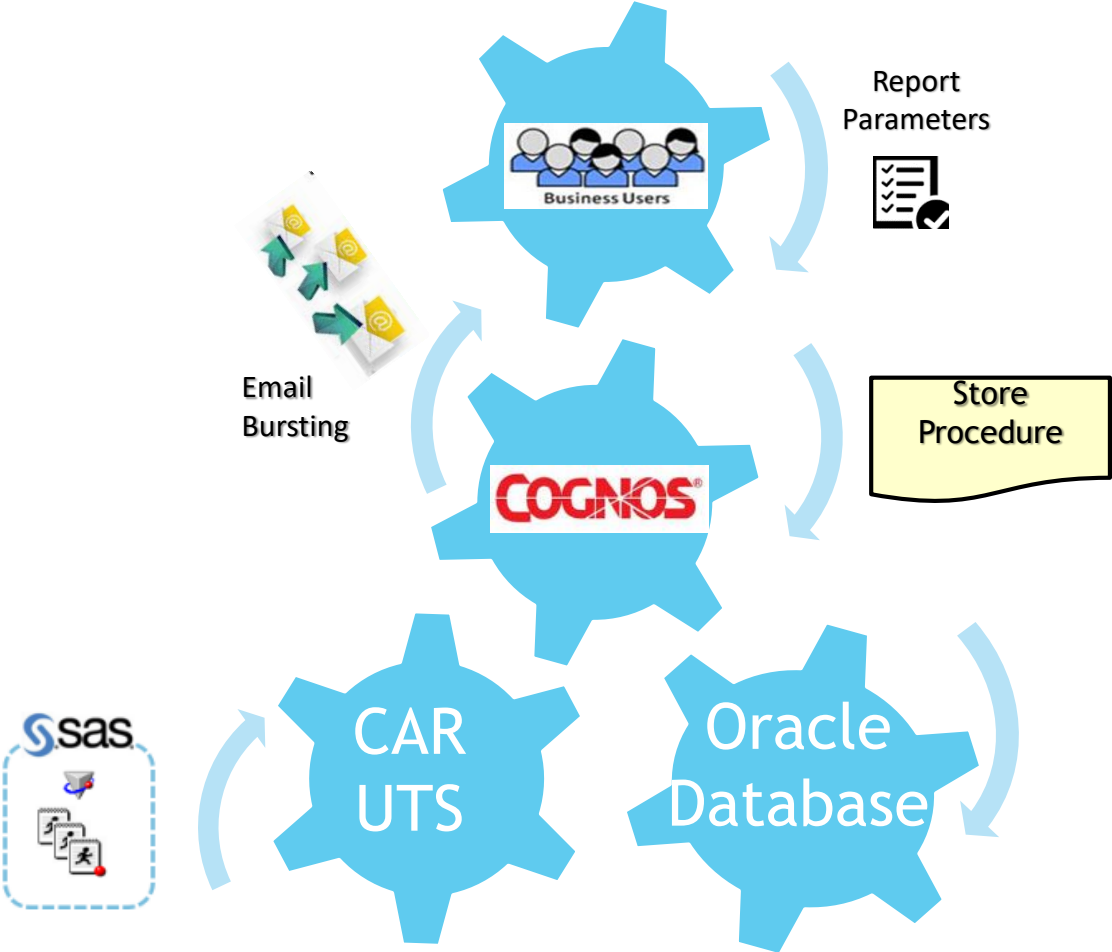
Cognos: Capability of Writing back to Oracle DB

**Presented by
Customer Analytics & Reporting Department
Issac Liu & Dipendra Pokhrel
Date: Sept 22, 2017**

Use case 2:

- User profile: Sales & Account Managers & business consultants
- Report is unique to each client's population makeup (including 200+ metrics at client level, adjusted regional, industry , and national benchmark)
- Each report have a set of unique parameters during intake
- Rapid response & email delivery

Self-Service Email Delivery Process Flow Diagram



Cognos user intake

Step 1: Company Name | Step 2: Account Structure | Step 3: Selection

MANUALLY ENTER COMPANY NAME

Report name cannot exceed 40 characters

Next

Step 1: Company Name | **Step 2: Account Structure** | Step 3: Selection

ENTER REGION-GROUP-SUBGROUP(S)

Select a Region

- SC
- GA
- GA
- GA
- GA
- GA
- GA

Selected "GA - OFF-STATE" for report run

MC - ST9 - All

Next

Enter a Group

ST9

Enter a Sub-Group

All

(Enter "All" if you wish to include every subgroup under the Region - Group combination)

< Back **Next >**

Step 1: Company Name | Step 2: Account Structure | **Step 3: Selection**

Please enter your kp email address (John.X.Doe@kp.org):

John.X.Doe@kp.org

Medicare	Quarter	Subscriber	KP Industry Average
Medicare Commercial	2009Q1	All Members	62 Health Care and Social Assistance

PLEASE MAKE SURE TO CHOOSE THE SAME REGIONS ON THIS SCREEN AS YOU DID ON THE PREVIOUS SCREEN.

< Back **Finish**

Cognos Framework Manager (Stored Proc Package)

Source

- IRAD_SP
 - UTS_CUSTMR_SS_RAW_INPUT
 - SP_UTS_CUSTMR_SS_RQSTS

Query Subject Definition - sp_updatetablecustmr_rqsts

Definition | Test | Query Information

Stored Procedure Name: Type: Data Source:

Syntax:
 PROCEDURE sp_updatetablecustmr_rqsts(:@p_rptid IN float64, :@p_quarter IN float64, :@p_subgroup IN nChar, :@p_account IN nChar, :@p_medicare IN nChar, :@p_subscriber IN nChar, :@p_email IN nChar, :@p_industry IN nChar);

Argument Name	Mode	Type	Format	Value
@p_rptid	in	float64	Size=8, Precision=0, Scale=0	#prompt('p_rptid','integer')#
@p_quarter	in	float64	Size=8, Precision=0, Scale=0	#prompt('p_quarter','integer')#
@p_subgroup	in	nChar	Size=512, Precision=255, Scale=0	#prompt('USParameter','string')#
@p_account	in	nChar	Size=512, Precision=255, Scale=0	#prompt('p_account','string')#
@p_medicare	in	nChar	Size=512, Precision=255, Scale=0	#prompt('p_medicare','string')#
@p_subscriber	in	nChar	Size=512, Precision=255, Scale=0	#prompt('p_subscriber','string')#
@p_email	in	nChar	Size=512, Precision=255, Scale=0	#prompt('p_email','string')#
@p_industry	in	nChar	Size=512, Precision=255, Scale=0	#prompt('p_industry','string')#

Edit Argument

Parameter Name: Mode: Type: Size: Precision: Scale:

Value:

Buttons: Add, Insert Macro, OK, Cancel, Help

Oracle Store Procedure

```
create or replace
PROCEDURE sp_uts_custmr_ss_rqsts0
(
  p_email IN OUT VARCHAR2,
  p_quarter IN OUT FLOAT,
  p_subgroup IN OUT VARCHAR2,
  p_account IN OUT VARCHAR2,
  p_medicare IN OUT VARCHAR2,
  p_subscriber IN OUT VARCHAR2,
  p_industry IN OUT VARCHAR2,
  p_rpt_sbjct IN OUT VARCHAR2,
  p_cursor IN OUT SYS_REFCURSOR
)
AS
v_RPTID NUMBER(10);
v_SYSDATE DATE := SYSDATE;
v_RPT_RUN_FLG VARCHAR(10) := 'N';
BEGIN
select max(RPTID)+1 into v_RPTID from TEMP_RAW;
if v_RPTID is NULL then v_RPTID:=1; END IF;
INSERT INTO TEMP_RAW
(
  rptid,
  email,
  measurement_prd,
  rpt_name,
  medicare_flg,
  sbscrb_in_cd,
  naics_cat,
  rpt_rqst_dt,
  RPT_RUN_FLG,
  RPT_SBJCT,
  RGN_CD,
  GRP_ID_NB,
  sgrp_id_nb
)
SELECT
  v_RPTID,
  p_email,
  p_quarter,
  p_account,
  p_medicare,
  p_subscriber,
  p_industry,
  p_RPT_SBJCT,
  a.*
  from TABLE(string_to_tabl(p_subgroup,',')) a
;
COMMIT;
OPEN p_cursor FOR SELECT * FROM TEMP_RAW WHERE RPTID=v_RPTID;
END;
```

Oracle Insert Table

- ▶ Live Demo:
- ▶ `select * from uts_irad.uts_custmr_ss_raw_input`
order by rptid desc

The screenshot shows an Oracle SQL Worksheet interface. The top bar includes 'SQL Worksheet' and 'History' tabs, along with a toolbar and a dropdown menu set to 'IRAD_UTS_PROD'. The main workspace is divided into 'Worksheet' and 'Query Builder' tabs. The 'Worksheet' tab contains the following SQL query:

```
--self-service checking data in UTS raw input table  
  
select * from uts_irad.uts_custmr_ss_raw_input  
order by rptid DESC
```

Below the query editor is the 'Query Result' section, which displays the results of the query. It indicates that 50 rows were fetched in 0.085 seconds. The results are shown in a table with the following columns: RPTID, EMAIL, MEASUREMENT_PRD, RGN_GRP_SGRP, RPT_NAME, MEDICARE_FLG, SBSCRB_IN_CD, and NAICS_CAT.

RPTID	EMAIL	MEASUREMENT_PRD	RGN_GRP_SGRP	RPT_NAME	MEDICARE_FLG	SBSCRB_IN_CD	NAICS_CAT
1	1220kathi.m.elder@kp.org	20164	'SC - 101000 - All'	County of Los Angeles Q4 2016 All	N	A	92 Public Administration
2	1219gregory.j.shuman@kp.org	20164	'SC - 227556 - All'	WalMart SCR	N	A	44 - 45 Retail

SAS ETL Steps:



- ▶ Extracting data from Oracle Database based on user input
- ▶ Transforming and summarizing data and applying business rule (complexity)
- ▶ Loading to reporting database table for Cognos to consume (simplicity)

Cognos Report Delivery via KP Email (Bursting)

Cognos Report Bursting

-  Customer Composite Scorecard
-  MD Composite Scorecard




Frequency:

Select the frequency by clicking on a link.

By Day | By Week | By Month

- Every minute(s)
- Every hour(s)
- Every day(s)

Bursting:

- Burst the report 

Delivery:

Select at least one delivery method. For burst reports, the email recipients are determined by the burst specification.

- Save:
 - Save the report
 - Save the report as a report view [Edit the options...](#)
 - [Report View of MD Composite Scorecard](#)
 - Save to the file system [Edit the options...](#)

Name: Use the report name. Location: CAR_Report_Output. Replace existing files
 - Print the report
- Printer location:** [Select a printer...](#)
- Send the report by email [Edit the options...](#)

