

SunGard Higher Education Solutions Converter Tool Training

<print name>

Technical Consultant

Introduction

- The SunGard Higher Education Solutions Converter Tool is an Oracle Forms application that simplifies the conversion process by querying Oracle table information to create conversion scripts
- It utilizes Banner API's when applicable

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	1	Overview		
	1	Demonstration of conversion into SPR	IDEN	
	12	Hands-on exercises		
		 SPRIDEN 		
		 SPBPERS 		
		SPRADDR		
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	1	Tips for Success		
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SunGard Higher Education Solutions Converter Tool

- Software that allows users to:
 - Enter conversion specifications for database tables
 - Dynamically generate 3 types of conversion scripts as well as mapping documents

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Features (cont')

- Validate legacy values against system validation tables
- Change the format of incoming date values
- Separate and identify errors for evaluation and correction
- And more …



Benefits

- Is tried and tested
- Is GUI--user friendly
- Is usable for any Oracle conversion effort (not restricted to Banner tables)
- Is flexible -- values not hard-coded
- Is usable for any interface task (not just conversion)
- Is repeatable

Steps in the Conversion

- Map the legacy data to the Banner (target) database
- Extract the data from legacy system into flat files
- Set up conversion specifications for Banner table loads (functions, defaults, etc.)
- Create temporary conversion tables
- Load temporary conversion tables



Steps in the Conversion (cont)

- Run the conversion script to translate legacy values into Banner values
- Evaluate and correct errors
- Run conversion script to insert Banner data from temporary conversion table to Banner Table
- Verify conversion results
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Scripts/Reports Generated

1. Create Table Script

- Creates temporary table for conversion data:
 <TargetTable>_cvt_create.sql
 spriden_cvt_create.sql
- Table naming convention: <TargetTable>_cvt SPRIDEN_CVT
- Table indexes included when required

OP TABLE SPRIDEN_CVT;	
EATE TABLE SPRIDEN_CVT (
SPRIDEN_PIDM	NUMBER(8),
CONVERT_PIDM	VARCHAR2(9),
SPRIDEN_ID	VARCHAR2(9),
CONVERT_ID	VARCHAR2(9),
SPRIDEN_LAST_NAME	VARCHAR2(60),
CONVERT_LAST_NAME	VARCHAR2(40),
SPRIDEN_CVT_RECORD_ID PRIMARY KEY,	NUMBER(8) CONSTRAINT PK_SPRIDEN_CVT
SPRIDEN_CVT_STATUS	VARCHAR2(1),
SPRIDEN_CVT_JOB_ID	NUMBER(8))
STORAGE (INITIAL 1M	
PCTINCREASE 0	
MAXEXTENTS UNLIMITED);	

spriden_cvt_create.sql (cont')



Scripts Generated (cont)

2. SQL*Loader Control Script

- Used by SQL*Loader to load data into the temporary table:
- Naming convention:

<TargetTable>_cvt.ctl spriden_cvt.ctl



spriden_cvt.ctl			
LOAD DATA INFILE 'SPRIDEN_CVT.DAT' APPEND			
INTO TABLE SPRIDEN_CVT (
CONVERT_PIDM	POSITION(1:9),		
CONVERT_ID	POSITION(10:18),		
CONVERT_LAST_NAME	POSITION(19:58),		
CONVERT_FIRST_NAME	POSITION(59:73),		
CONVERT_MI	POSITION(74:88),		
CONVERT_CHANGE_IND	POSITION(89:89),		
CONVERT_ENTITY_IND	POSITION(90:90),		
CONVERT_ACTIVITY_DATE	POSITION(91:98),		
CONVERT_USER	POSITION(99:128),		
SPRIDEN_CVT_RECORD_ID	SEQUENCE(MAX,1),		
SPRIDEN_CVT_STATUS	CONSTANT 'N')		
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Scripts Generated (cont)

3. Conversion Script

- Translates legacy values into Banner values by applying functions, default values, and/or computed values to target table columns
- Moves data from temporary table to target table:
 - <TargetTable>_convert.sql

spriden_convert.sql

"Use Generated ID's" special PL/SQL code



	 Uses Banner API's when available 	
	spriden_convert.sql Example:	
	API variables:	
	v_ID_INOUT VARCHAR2(2000);	
	V_LAST_NAME VARCHAR2(2000); V_EIRST_NAME VARCHAR2(2000);	
	v_MI VARCHAR2(2000);	
	API PL/SQL code:	
E	3EGIN	
	Columns Checked to not INSERT	



Reports Generated (cont)

4. Mapping/Log Document

- presents columns needed for conversion
- displays data dictionary column definitions
- displays all functions used in convert script
- serves as reference for conversion activity

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Installation: DBA Issues

- Your DBA will:
 - Create a separate conversion user and schema
 - Assure proper undo (formerly rollback) segments
 - Create proper tablespaces
 - Assure correct tablespace sizing
 - Set proper buffer size

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Logging In Log in to the Converter Tool using Your user name		
Your password		
Logan Social Statements (Cancel)		
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Control form (CUBCTRL table)

- Sets "Use Generated ID's"
- Select file location and directory for conversion files
 Use Oracle (10G) directories setup command:
 - Use Grade (10G) directories setup command: SQL>create directory <directory_name> as '<directory_path>' Example:

SQL>create directory TOM as '/u01/export/home/tbraun'

Turn on Audit changes



Conversion Tool Control Form (4.0) Use Generated Ds File Location Cacad Machine Database Server	17×
Default Directory for Scripts FOM Aude Changes on CUACIN/T Activity Date In-PER-2005	в







Colum	SPRIDEN_PION	Load Order 1 Required	
Value U	e Veld Fill	Acher Des Concertate	-
Defe	t Defaut Action		
Allow	rs you to enter a variet	y of conversion spec	ifications for
each	data element or field ir	Banner Table	





















F_CVT_AUTO_PIDM function

- Creates the PIDM for all incoming records in the spriden_cvt.dat file
- Requires a break point to be set on
 SPRIDEN_CHANGE_IND DESC so current ID's are processed first.
 CONVERT_CHANGE_IND DESC column if converting name changes
- Will utilize PIDM_SEQUENCE Oracle sequence via the function

gb_common.f_generate_pidm







	Is a Value in pidm Field?	Description	Action	
	NO	Brand New Person	Generate New pidm	
	YES	Person Associated with prior record	Get pidm from prior record.	
Spriden_pidm	convert_pidm con	vert_id convert_firs	t convert_last	convert_ change_Ind
1304	00000003 000	000003 Joe	Root	N
	00000003 123	408762 Sam	ROOT	1









Crosswalk Form

- Translates legacy values to target system values
- Handles many-to-one relationships between incoming legacy values and target table values
- Accepts loading of crosswalk values from external source Capable of inserting validation into Banner

Entity S	TVATYP	Options			
Legacy Value	Legacy Description	Banner Value	Banner Description	Option 1 Option	2 Option 3
B	Business Address	BO	Business		
[(Halling Houress		P STITUE IST.		t i
					<u> </u>
<u> </u>					<u> </u>
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Inserting Crosswalk Functions

- Crosswalk Functions can be inserted into the Convert Script
 - Use F_CVT_CURCVAL or

 - F_CVT_CURCVAL_RNULL functions converted_val := F_CVT_CURCVAL('STVATYP',LEGACY_VALUE);
- Enter the following parameters:
 - Entity
 - Legacy_Value
 - Additional legacy values for option 1, 2, and 3

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Tab	le Name	SPRIDEN	Owner SA	TURN	Convert J	ob ld 🕱	
Conv Job	Record ID	Column Name ISPRIDEN LAST NAME	Legacy Value	Barner Value	Activity Date	Idam Frenz	•
	[Mexing serviced ushas				THE ENDER	1
5	2030	SPRIDEN_LAST_NAME			05-FEB-2005	View Error	
_	-	Maxina samind using		-	-		
	-		11	.HC	1 Li	View Error	
	1	1				View Error	
		1				-	
	-	[) <u> </u>		View Error.	
	·	Delete all	rows in Error Table	e for Job 5			



	Errors (CURCERR table)		
	Name	Null?	Туре
	CURCERR_TABLE_OWNER		VARCHAR2(30)
	CURCERR_TABLE_NAME		VARCHAR2(30)
	CURCERR_COLUMN_NAME		VARCHAR2(60)
	CURCERR_CVT_IDENTIFIER		NUMBER(6)
	CURCERR_RECORD_ID		NUMBER(8)
	CURCERR_LEGACY_VALUE		VARCHAR2(100)
	CURCERR_BANNER_VALUE		VARCHAR2(100)
	CURCERR_ERRNO		NUMBER(6)
	CURCERR_MESSAGE		VARCHAR2(300)
	CURCERR_ACTIVITY_DATE		DATE
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Errors (CURCERR table)
<pre>select * from curcerr where curcerr_table_name = 'SPRIDEN'</pre>
<pre>select * from spriden_cvt where spriden_cvt_record_id = any (select curcerr_record_id from curcerr where curcerr_table_name = 'SPRIDEN')</pre>
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Step 2: Execute sqlldr to Load the Temp Table 'Convert' columns						
At the unix prompt, execute sqlldr:						
sqlldr myname/mypwd spriden_cvt.ctl						
The spriden_cvt table - contains both a CONVERT and a SPRIDEN column for each field sqlldr populates only the CONVERT columns, SPRIDEN columns are null.						
SPRIDEN_FIDM CONVERT_FIDM SPRIDEN ID CONVERT_ID SPRIDEN_LAST_NAMECONVERT_LAST_NAME CHANCE 000025205 000025205 000025205 Moore N						
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Verifying Converted Data

- Examine the table.
- Ensure traceability to mapping documents.
- Examine logs.
 - Note why sqlldr records did not load. e.g. spriden_cvt.log
 - Note why cvt_status='E' check curcerr
 - Note why cvt_status did not change from 'C' to 'l'

Verifying Converted Data - continued

- To find the same person across tables, use the convert_id in spriden_cvt to match convert_pidm in other cvt tables. Use the spriden_pidm to track records in Banner
- Randomly select records in Banner, compare to legacy records.
- Always do the math all records need to be accounted for.
- Go to the Banner application. Examine screens, manipulate the data to make sure of correct behavior.

Tips for Using CTOOL in "Real" Conversion

- Use only ONE schema for each system.
 - Functions are schema specific. If more than one schema is used, functions may be missing.
- Create indexes on table columns accessed by other tables.
- Determine function and script naming conventions.
 E.g.
 - f_institution_tablename_description.sql
 - cvt_instituition_tablename_description.sql

Tips for Using CTOOL in "Real" Conversion

- Keep log of record counts, errors, issues.
- Keep log of conversion process.
- Validate data in tables and in forms.
- Export conversion schema for backup and/or import to another instance.
 - To export converter table values
 exp username/pw@inst file=ctool_tables.dmp tables=(cubctrl,cubcnvt,curcnvt,cubvers, curcval)
 - To export functions
 - exp username/pw@inst file=ctool_objects.dmp owner=sctcvt,rows=n

Keys to Conversion Success Clean data source file Accurate data mapping Accurate cross-walking Concurrent between databases Accurate data manipulation Accurate, re-usable conversion scripts A user-friendly, efficient, flexible tool

Final Note

It does most of the work but NONE of the thinking!



Questions?

- Versions
- How do I get the tool/software
 Service Center / Help Desk Handout
- Best Practices - How does the tool know existing API's
- Enhancements





