

## Key\_Generation Transform

by Sudheer Sharma - Monday, February 23, 2009

<http://dwhnotes.com/data-integrator/key-gen>

What do you think of this post?

[Awesome \(6\)](#) [Interesting \(2\)](#) [Useful \(0\)](#)

When creating a dimension table in a data warehouse, we generally create the tables with a system generated key to uniquely identify a row in the dimension. This key is also known as a surrogate key.

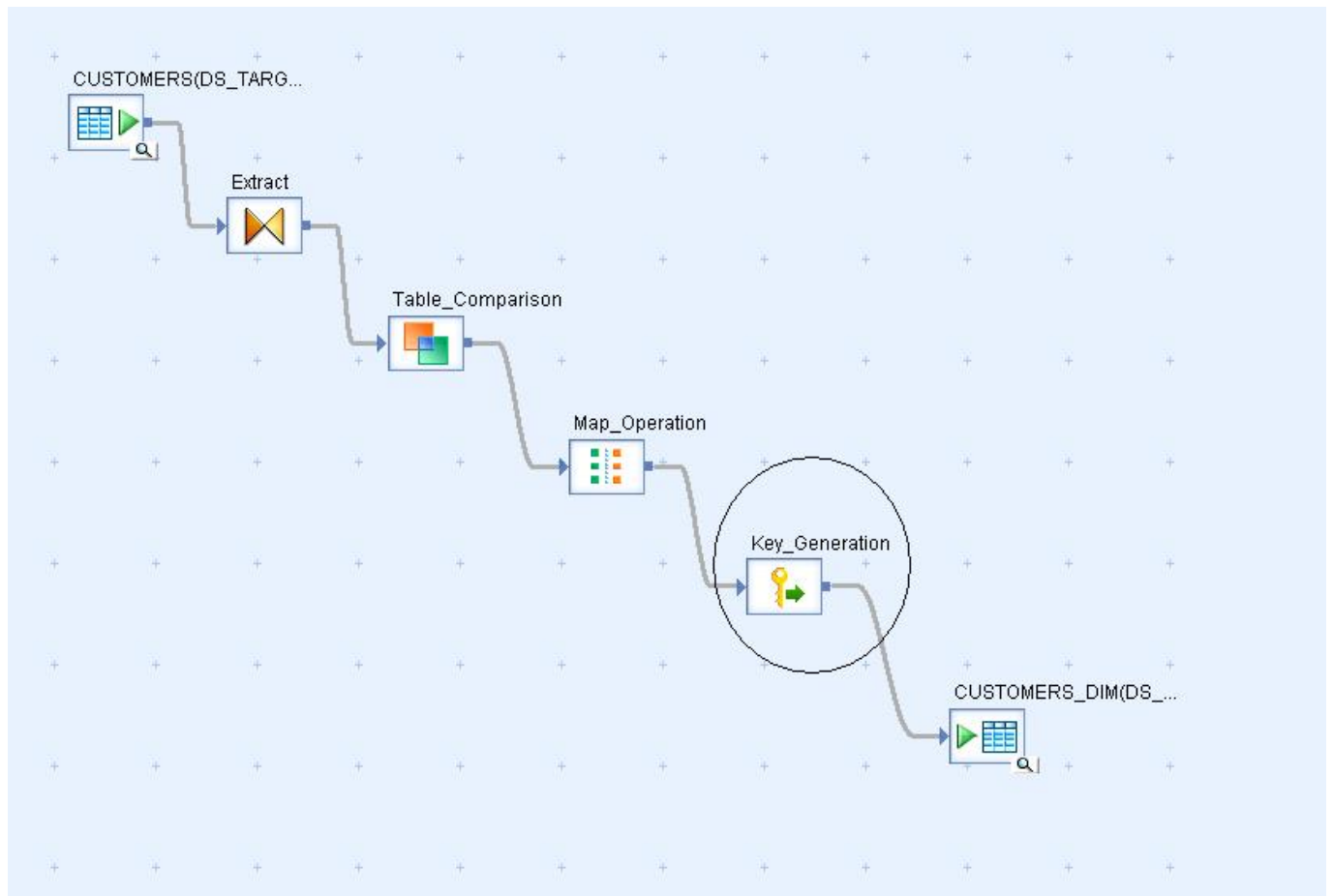
**Note on Key\_Generation:** To generate artificial keys in DI we can use either **Key\_Generation Transform** or **Key\_Generation Function**. It looks into the table and fetches max. existing key value and that will be used as a starting value. Based on this starting value, transform/function increments the value for each row.

**Options: We have three options**

- **Table Name :** You should provide table name along with the Datastore and Owner (**DATASTORE.OWNER.TABLE**)
- **Generated Key Column :** The new artificial keys are inserted into this column. Remember your key column should be in any number datatype (REAL, FLOAT, DOUBLE, INTEGER, DECIMAL), if it is any other data type, then DI will throw an error.
- **Increment value :** Specify your interval for system generated key values. Surrogate key will be incremented based on this interval value. From 11.7 version onwards, we can pass variables also.

ISESSION Job\_SCD\_TYP1\_M1|DATAFLOW\_SCD\_TYP1\_I|STATEMENT <GUID::'45d3519d-3056-4f57-88b8-75e22da81d75'| TRANSFORM Table\_Comparison  
Generated key column <SURROGATE\_KEY> for table <CUSTOMERS\_DIM> must be of type REAL, FLOAT, DOUBLE, INTEGER, DECIMAL, or NUMERIC.

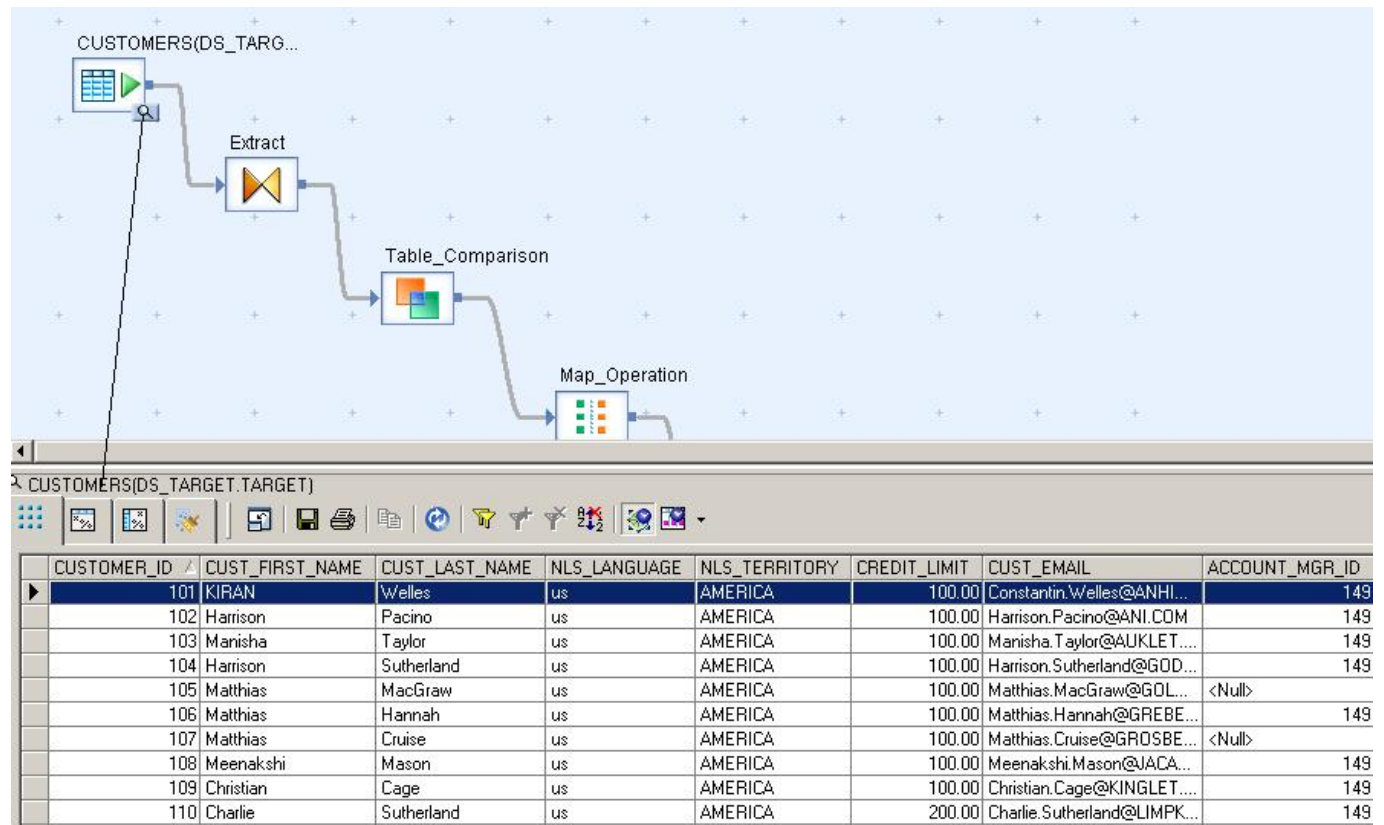
**Design Steps:** Here I'm populating customer information, I've a primary called **Customer\_ID** in the both source & target tables, but I want to maintain a **SURROGATE\_KEY**.



Have a glance on source data, here it is

## Key\_Generation Transform - 02-23-2009

by Sudheer Sharma - A small notes. . . - <http://dwhnotes.com>



CUSTOMER_ID	CUST_FIRST_NAME	CUST_LAST_NAME	NLS_LANGUAGE	NLS_TERRITORY	CREDIT_LIMIT	CUST_EMAIL	ACCOUNT_MGR_ID
101	KIRAN	Welles	us	AMERICA	100.00	Constantin.Welles@ANHI...	149
102	Harrison	Pacino	us	AMERICA	100.00	Harrison.Pacino@ANI.COM	149
103	Manisha	Taylor	us	AMERICA	100.00	Manisha.Taylor@AUKLET....	149
104	Harrison	Sutherland	us	AMERICA	100.00	Harrison.Sutherland@GOD...	149
105	Matthias	MacGraw	us	AMERICA	100.00	Matthias.MacGraw@GOL....	<Null>
106	Matthias	Hannah	us	AMERICA	100.00	Matthias.Hannah@GREBE...	149
107	Matthias	Cruise	us	AMERICA	100.00	Matthias.Cruise@GROSBE...	<Null>
108	Meenakshi	Mason	us	AMERICA	100.00	Meenakshi.Mason@JACA...	149
109	Christian	Cage	us	AMERICA	100.00	Christian.Cage@KINGLET....	149
110	Charlie	Sutherland	us	AMERICA	200.00	Charlie.Sutherland@LIMPK...	149

key\_gen transform always expects a SURROGATE\_KEY column in **SCHEMA IN**

# Key\_Generation Transform - 02-23-2009

by Sudheer Sharma - A small notes. . . - <http://dwhnotes.com>

Schema In: Map\_Operation

Column	Type
SURROGATE_KEY	decim
CUSTOMER_ID	decim
CUST_FIRST_NAME	varch
CUST_LAST_NAME	varch
NLS_LANGUAGE	varch
NLS_TERRITORY	varch
CREDIT_LIMIT	decim
CUST_EMAIL	varch
ACCOUNT_MGR_ID	decim
OPCODE	varch

Schema Out: Key\_Generation

Column	Type
SURROGATE_KEY	decimal(28,0)
CUSTOMER_ID	decimal(28,0)
CUST_FIRST_NAME	varchar(20)
CUST_LAST_NAME	varchar(20)
NLS_LANGUAGE	varchar(3)
NLS_TERRITORY	varchar(30)
CREDIT_LIMIT	decimal(9,2)
CUST_EMAIL	varchar(30)
ACCOUNT_MGR_ID	decimal(28,0)
OPCODE	varchar(1)

Key Generation

Table name: DS\_TARGET.TARGET.CUSTOMERS\_DIM

Generated key column: SURROGATE\_KEY

Increment value: 1

After completion of your job execution, here is the target customers\_dim target data with surrogate key values.

# Key\_Generation Transform - 02-23-2009

by Sudheer Sharma - A small notes. . . - <http://dwhnotes.com>

The screenshot shows a workflow in an ETL tool. A transform icon labeled 'Key\_Generation' is connected to a target table icon labeled 'CUSTOMERS\_DIM(DS...'. Below this, a table viewer displays the data for 'CUSTOMERS\_DIM(DS\_TARGET.TARGET)'. The table has columns for surrogate keys and customer information.

SURROGATE_KEY	CUSTOMER_ID	CUST_FIRST_NAME	CUST_LAST_NAME	NLS_LANGUAGE	NLS_TERRITORY	CREDIT_LIMIT	CUST_EMAIL
1	101	KIRAN	Welles	us	AMERICA	100.00	Constantin.Welles@ANHI...
2	102	Harrison	Pacino	us	AMERICA	100.00	Harrison.Pacino@ANI.COM
3	103	Manisha	Taylor	us	AMERICA	100.00	Manisha.Taylor@AUKLET....
4	104	Harrison	Sutherland	us	AMERICA	100.00	Harrison.Sutherland@GOD...
5	105	Matthias	MacGraw	us	AMERICA	100.00	Matthias.MacGraw@GDL...
6	106	Matthias	Hannah	us	AMERICA	100.00	Matthias.Hannah@GREBE...
7	107	Matthias	Cruise	us	AMERICA	100.00	Matthias.Cruise@GROSBE...
8	108	Meenakshi	Mason	us	AMERICA	100.00	Meenakshi.Mason@JACA...
9	109	Christian	Cage	us	AMERICA	100.00	Christian.Cage@KINGLET....
10	110	Charlie	Sutherland	us	AMERICA	200.00	Charlie.Sutherland@LIMPK...
11	111	Charlie	Pacino	us	AMERICA	200.00	Charlie.Pacino@LONGSP...
12	112	Guillaume	Jackson	us	AMERICA	200.00	Guillaume.Jackson@MOO...

What do you think of this post?

[Awesome \(6\)](#) [Interesting \(2\)](#) [Useful \(0\)](#)