



Transformation Language

Transformation Language

- The designer provides a transformation language to help you write expressions to transform source data
- With the transformation language, you can create a transformation expression that takes the data from a port and changes it
- Can write expressions in the following transformations:
 - Aggregator
 - Expression
 - Filter
 - Rank
 - Router
 - Update Strategy

Transformation Language (Contd.).

- Expressions can consist of any combination of the following components:
 - Ports (input, input/output, variable)
 - String literals, numeric literals
 - Constants
 - Functions
 - Local and built-invariables
 - Mapping parameters and mapping variables
 - Operators
 - Return values

Transformation Language (Contd.).

- The functions available in PowerCenter are
 - Aggregate Functions e.g. AVG, MIN, MAX
 - Character Functions e.g. CONCAT, LENGTH
 - Conversion Functions e.g. TO_CHAR, TO_DATE
 - Date Functions e.g. DATE_DIFF, LAST_DAY
 - Numeric Functions e.g. ABS, CEIL, LOG
 - Scientific Functions e.g. COS, SINH
 - Special Functions e.g. DECODE, IIF, ABORT
 - Test Functions e.g. ISNULL, IS_DATE
 - Variable Functions e.g. SETMAXVARIABLE

Transformation Expressions

- The pre-compiled and tested transformation expressions help to create simple or complex transformation expressions
- Functions - Over 60 SQL-like functions allow to change data in a mapping
- Aggregates
 - Calculate a single value for all records in a group
 - Return a single value for each group in an Aggregator transformation
 - Apply filters to calculate values for specific records in the selected ports
 - Use operators to perform arithmetic within the function
 - Calculate two or more aggregate values derived from the same source columns in a single pass
 - Filter condition can be applied to all aggregate functions. The filter condition must evaluate to TRUE, FALSE, or NULL. If the filter condition evaluates to NULL or FALSE, the Integration Service does not select the record
 - For example, the following expression calculates the median salary for all employees who make more than \$50,000:
MEDIAN(SALARY, SALARY > 50000)

Transformation Expressions (Contd.).

- Characters

- Character functions assist in the conversion, extraction and identification of sub-strings.
- For example, the following expression evaluates a string, starting from the end of the string. The expression finds the first space and then deletes characters from first space to end of line.

`SUBSTR(CUST_NAME,1,INSTR(CUST_NAME,' ', -1,1))`

- Conversions

- Conversion functions assist in the transformation of data from one type to another
- For example, the following expression converts the dates in the DATE_PROMISED port to text in the format MON DD YYYY:
`TO_CHAR(DATE_PROMISED, 'MON DD YYYY')`

DATE_PROMISED	RETURN VALUE
Apr 1 1998 12:00:10AM	'Apr 01 1998'

Transformation Expressions (Contd.).

- Date
 - Date functions help you round, truncate, or compare dates; extract one part of a date; or to perform arithmetic on a date
 - For example, the following expression would return the month portion of the date :
`GET_DATE_PART(Apr 1 1997 00:00:00, 'MM')`
- Numerical and Scientific
 - Numerical and scientific functions assist with mathematical operations needed in transformation processing
 - For example, the following expression returns the average order for a Stabilizing Vest, based on the first five records in the Sales port, and thereafter, returns the average for the last five records read: `MOVINGAVG(SALES, 5)`

RECORD_NO	SALES	RETURN VALUE
1	600	NULL
5	550	358
6	39	245.8

Transformation Expressions (Contd.).

- Miscellaneous
 - Informatica also provides functions to assist in :
 - aborting or erroring out records
 - developing if then else structures
 - looking up values from a specified external or static table
 - testing values for validity (such as date or number format)
 - For example, the following expression might cause the server to skip a value :
IIF(SALES < 0, ERROR('Negative value found'), EMP_SALARY)

SALES	RETURN VALUE
100	100
-500	Server skips record
400.55	400.55
800.10	800.10

Transformation Expressions (Contd.).

- **Operators** : Use transformation operators to create transformation expressions to perform mathematical computations, combine data, or compare data
- **Constants** : Use built-in constants to reference values that remain constant, such as TRUE, FALSE, and NULL
- **Variables** : Use built-in variables to write expressions that reference values that vary, such as the system date. You can also create local variables within a transformation
- **Return values** : You can also write expressions that include the return values from Lookup, Stored Procedure, and External Procedure transformations



Thank You