



Data Testing Checklist

Ensure Coverage and Completeness for Data Integrity

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Data Quality Dimension	Details + Example	Data Quality Tests	Tricentis Support
<p>Accuracy</p> <p>Data objects correctly represent the values</p>	<ul style="list-style-type: none"> ▪ Data objects accurately represent the values they are expected to model ▪ Data contained in original source is exactly as in target or its transformation ▪ The extent to which data are correct, reliable, and certified <p>Example: The product must have a list price</p>	<ul style="list-style-type: none"> ▪ Data element precision checks ▪ Data values defined and populated per requirements ▪ Data elements correspond to data types ▪ Null or blank values are as expected ▪ Truncated data is as expected ▪ Data transformations are correct 	<p>Build tests that monitor the presence of the data</p>
<p>Completeness</p> <p>Data is not missing</p>	<ul style="list-style-type: none"> ▪ The extent to which elements associated with entities (ex., table) are comprised of all expected values for all expected attributes <p>Example: An order is not complete without a price and quantity</p>	<ul style="list-style-type: none"> ▪ Record counts for sources and targets match ▪ Data integrity checks for all keys ▪ Out-of-boundary checks for data ▪ SCD and CDC checks ▪ Record counts as expected ▪ Null value checks for all columns 	<p>Run the following tests:</p> <ul style="list-style-type: none"> ▪ Pre-screening tests to check for missing values, duplicates, data formats etc. ▪ Completeness tests for count comparisons between source and target ▪ Reconciliation tests to perform complete source-to-target comparisons
<p>Conformity</p> <p>Data conforms to a specified format</p>	<ul style="list-style-type: none"> ▪ Data conforms to business rules to meet users' expectations ▪ Data values conform to specified formats <p>Example: The order date must be in the format YYYY/MM/DD</p>	<ul style="list-style-type: none"> ▪ Correct implementation of business rules ▪ Correct date/time formats ▪ Data types represent requirements ▪ Data values per column as per specifications ▪ Report formats comply with requirements ▪ Data elements conform to data models ▪ Metadata conforms to requirements across environments 	<p>Run metadata tests to check whether table and column information has changed</p>

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<p>Consistency</p> <p>Distinct data instances provide non-conflicting information about the same underlying data object</p>	<ul style="list-style-type: none"> The extent to which data attributes values are free from contradiction and coherent with other data in a specific context of use Data equivalence is maintained during data movements <p>Example: The salary range for level 4 employees is between \$40,000 and \$65,000</p>	<ul style="list-style-type: none"> Source to target field mapping checks "Measure values" checking One to one, many to one value, many to many data value checks Slowly changing dimensions (SCD) consistently applied Data values conform to data types and data lengths 	<p>Use models to add business logic, ensure business process requirements are validated</p>
<p>Integrity</p> <p>Data is not missing important relationship linkages</p>	<ul style="list-style-type: none"> The exactness with which two or more data objects are combined to create new data The degree to which data maintains significant relationship linkages The maintenance and assurance of the accuracy and consistency of data over its entire lifecycle during data integration/movement <p>Example: The date for putting a product for sale must be valid</p>	<ul style="list-style-type: none"> Data aggregation rules applied correctly Correctness of referential integrity (ex., primary and foreign keys) Data element values within specified ranges Data values conform to business rules Correctness of concatenated data from multiple sources/fields 	<p>Run referential integrity tests to check that complete records have been copied and that technical as well as logical integrity is maintained</p>
<p>Precision</p> <p>The measurement or classification detail used in specifying an attribute's domain</p>	<ul style="list-style-type: none"> The measurement or classification detail used in specifying an attribute's domain <p>Example: Prices must use the expected precision vs. being rounded to the whole dollar</p>	<ul style="list-style-type: none"> Numeric field precisions calculated and presented correctly Numeric data precisions per requirements Data trimming is correct Data values are not truncated 	<p>Run reconciliation tests to check for precision or tolerances</p>

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<p>Timeliness</p> <p>Data is sufficiently up to date for the task at hand</p>	<ul style="list-style-type: none"> ▪ Assurance that all data reflects times and dates correctly and is available within the required time frame ▪ The relative availability of data to support a given process within the timetable required to perform the process <p>Example: Hats, mittens and scarves are in stock by November</p>	<ul style="list-style-type: none"> ▪ Dates, time values loaded as defined ▪ Dates, times values within boundaries of requirements ▪ Date/time formats defined as required ▪ Date/time fields not null or blank ▪ Most recent dates and times expected are included 	<p>Assist with data aging validations</p>
<p>Uniqueness</p> <p>The data for a set of columns is not repeated</p>	<ul style="list-style-type: none"> ▪ Confirm that constraints applied as defined (ex., uniqueness, PK, FK and Indexes) ▪ Unique data defined so that there will be no duplicates <p>Example: The new product name must be unique (not in the product master table)</p>	<ul style="list-style-type: none"> ▪ Duplicate values checked for all fields and records ▪ Duplicate records and fields removed where specified ▪ Duplicate primary, foreign, and surrogate keys do not exist ▪ Surrogate keys assigned where needed 	<p>Run uniqueness tests to check for the uniqueness constraint defined in the database</p>