



# Data Testing Checklist

Ensure Coverage and Completeness for Data Integrity

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

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

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