

ETL TESTING:

ETL (Extract/Transform/Load) is a process which extracts data from source systems and transforms the information into a consistent data type, then loads the data into a single depository. ETL testing refers to the process of validating, verifying, and qualifying data while preventing duplicate records as well as data loss.

ETL testing ensures that the transfer of data from heterogeneous sources to the central data_warehouse. It differs from data reconciliation used in testing in that ETL testing is applied to_data warehouse systems and used to obtain relevant information for analytics and business intelligence.

Stages of ETL Testing Process:

The process can be tested into eight stages:-

- **Identifying of business requirements** — Design the data model, define business flow, and assess reporting needs based on client requirements.
- **Validate data sources** — perform a data count check and verify that the table and column data type meets specifications of the data model. If not done correctly, the aggregate report could be inaccurate or misleading.
- **Design test cases** — Design ETL mapping scenarios, create SQL scripts, and define transformational rules. It is important to validate the mapping document as well, to ensure it contains all of the information.
- **Extract data from source systems** — Execute ETL tests per business requirement. Identify types of bugs or defects encountered during testing and

make a report. It is important to detect and reproduce any defects, report, fix the bug, resolve, and close bug report — before continuing to Step 5.

- [Apply transformation logic](#) — Ensure data is transformed to match schema of target data warehouse. Check data threshold, alignment, and validate data flow. This ensures the data type matches the mapping document for each column and table.
- [Load data into target warehouse](#) — perform a record count check before and after data is moved from staging to the data warehouse. Confirm that invalid data is rejected and that the default values are accepted.
- [Summary report](#) — Verify layout, options, filters and export functionality of summary report. This report lets decision-makers/stakeholders know details and results of the testing process and if any step was not completed i.e. “out of scope” and why.
- [Test Closure](#) — File test closure.

Course Content:

- Purpose of Data warehouse
- Tools used to Load data into the data warehouse
- About Data warehouse Testing
- Need for ETL Testing
- ETL Testing phases
- Business understanding



+1 302-207-0005
info@uiskills.com

- Test plan creation
- Test environment setup
- Test script generations
- Execution
- Reporting
- How is ETL Testing different from normal Testing
- How to ensure no data loss
- Transformation Rules
- Data validation Strategies
- Data file loads
- Data validation with in staging tables to check all Mapping rules
- Data validation with in Target tables to ensure data is present in required format
- Staging Area
- Test approach and procedure in staging area
- SOR Area
- Test approach and procedure in SOR area
- Data marts Area
- Test approach and procedure in Data marts are



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- Live project examples of ETL Testing with Data stage ETL Tool
- Most commonly used SQL oracle queries useful in ETL Testing
- Most frequently asked Interview Questions

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- Logistical convenience and interactive classroom experience of Online Training
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- Interview preparation with mock interview drills
- Effective resume building
- Process of applying jobs at the right places

Reach us:

Call : +1 302-207-0005

Email ID: info@uiskills.com

Website: www.uiskills.com

