**Title: ETL Test Cases Document**

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**Section 1: Pre-check Test Cases for ETL Jobs**

**1. Environment Check Test Cases**

* **TC001**: Verify Environment Availability  
  Ensure all environments (source, staging, target) are accessible and available.
* **TC002**: Verify ETL Tool Accessibility  
  Confirm that the ETL tool or platform is accessible and operational.
* **TC003**: Check Server Health  
  Verify the servers hosting the ETL tool, source, and target systems are running without issues (e.g., CPU, memory, and disk space).
* **TC004**: Verify Network Connectivity  
  Ensure network connectivity between the source, staging, and target systems is active and stable.

**2. Source System Check Test Cases**

* **TC005**: Verify Source Data Availability  
  Confirm that the source data/files required for the ETL process are present and accessible.
* **TC006**: Verify Source Data Format  
  Validate that the source data is in the correct format (e.g., CSV, JSON, XML) as expected by the ETL process.
* **TC007**: Check Source Data Volume  
  Verify the expected number of rows and files in the source system to ensure completeness.
* **TC008**: Check Source System Permissions  
  Ensure that the ETL tool has the necessary read access permissions to extract data from the source system.

**3. Target System Check Test Cases**

* **TC009**: Verify Target System Availability  
  Ensure the target system (e.g., database, data warehouse) is online and ready to receive data.
* **TC010**: Verify Target System Permissions  
  Confirm that the ETL tool has the necessary write permissions to load data into the target system.
* **TC011**: Check Target Table/Schema Readiness  
  Validate that the required tables, schemas, or directories exist in the target system and are ready for data loading.
* **TC012**: Check Disk Space in Target System  
  Verify there is sufficient disk space in the target system to handle the incoming data volume.

**4. ETL Job Configuration Check Test Cases**

* **TC013**: Verify Job Parameters  
  Confirm all required parameters (e.g., date ranges, file paths, database connections) are correctly configured.
* **TC014**: Check Transformation Logic Configuration  
  Ensure transformation rules (e.g., mappings, lookups, filters) are correctly configured.
* **TC015**: Verify Incremental/Full Load Settings  
  Validate that the ETL job is set to run in the correct mode as per requirements.
* **TC016**: Verify Scheduling  
  Confirm that the ETL job is scheduled to run at the correct time or triggered manually.

**5. Data Quality Pre-checks**

* **TC017**: Validate Source Data Integrity  
  Check for data integrity issues in the source system (e.g., nulls, duplicates).
* **TC018**: Verify Lookup Table Availability  
  Confirm that all required lookup tables are populated and available for the ETL process.
* **TC019**: Check Data Thresholds  
  Ensure that data volume/size does not exceed the defined thresholds.
* **TC020**: Validate Mandatory Fields  
  Verify all mandatory fields in the source system are populated and not null.

**Section 2: Generic ETL Test Cases**

**1. Data Extraction Test Cases**

* **TC001**: Verify Source Data Connectivity
* **TC002**: Verify Data Volume
* **TC003**: Verify Data Completeness
* **TC004**: Verify Supported File Formats

**2. Data Transformation Test Cases**

* **TC005**: Verify Transformation Logic
* **TC006**: Verify Data Type Transformation
* **TC007**: Verify Business Rules Implementation
* **TC008**: Verify Null and Default Values
* **TC009**: Verify Data Integrity
* **TC010**: Verify Duplicate Handling

**3. Data Loading Test Cases**

* **TC011**: Verify Target Data Connectivity
* **TC012**: Verify Data Consistency
* **TC013**: Verify Data Volume
* **TC014**: Verify Data Partitioning
* **TC015**: Verify Load Performance
* **TC016**: Verify Error Logging

**4. End-to-End Data Quality Test Cases**

* **TC017**: Verify Data Accuracy
* **TC018**: Verify Data Completeness
* **TC019**: Verify Data Duplication
* **TC020**: Verify Data Validation Rules

**5. Negative Test Cases**

* **TC021**: Invalid Source Data
* **TC022**: Missing Source Data
* **TC023**: Incorrect File Format
* **TC024**: Network Failure

**6. Performance and Scalability Test Cases**

* **TC025**: High Volume Data Test
* **TC026**: Concurrent User Load
* **TC027**: Incremental Load Test
* **TC028**: ETL Job Scheduling

**7. Security Test Cases**

* **TC029**: Verify Access Control
* **TC030**: Data Encryption
* **TC031**: Audit and Logging