Data Testing Methodology

Functional Testing	Data Extraction Testing	Data Migration Testing	Data Analytics Testing
Ensuring…	• Batch processing job validation • Streaming ingestion workflow • Source-to-Target column mapping • Validate integration of data from multiple sources	• Post-migration Data accuracy validation (consistency, accuracy, constraints, data duplication) • Data transformation validation, Data lineage	• Verification of accuracy, completeness and report format by end users • Validate analytics functionality/ accuracy • Web app/ Mobile app validation

Non-Functional Testing	Platform Testing	Performance Testing	Security Testing
Ensuring…	• Validate configuration and compatibility of installed components • Validate requirements for hardware and infrastructure components • Failover testing – recovery design & config.	• Performance under load of big data applications – response time, processing capacity, concurrent user handling • Performance limits and boundary conditions	• Access validation on data and name nodes • Authentication testing to verify authorized user and Role based access • Data level security – access to data based on permissions

Tools	APACHE FALCON kafka Ganglia Nagios APACHE JMeter JEPSEN