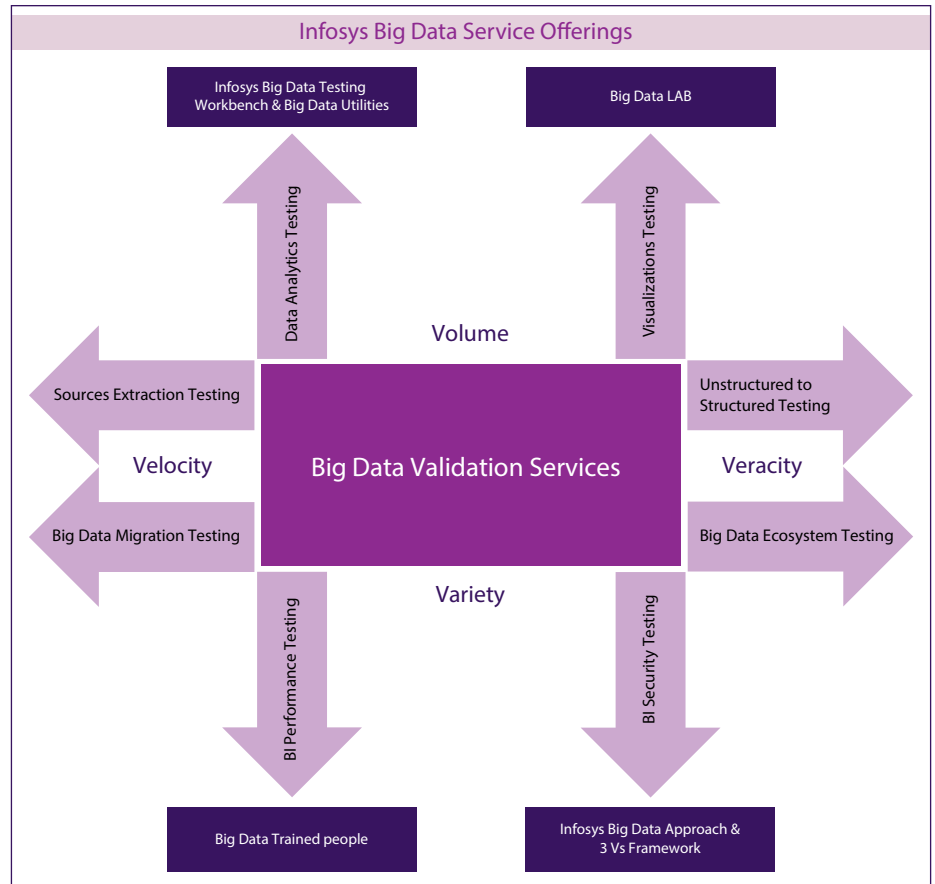# INFOSYS BIG DATA TESTING SERVICES

Organizations are adopting Big Data programs in a big way to drive data analytics solutions. However, they need to define a robust end-to-end testing strategy in optimum test environments – a significant challenge and a critical factor for implementation success.

The Infosys Big Data Testing Services Solution offers end-to-end testing from data acquisition testing to data analytics testing. It offers the following key capabilities:

- Robust tools such as the Infosys Data Testing Workbench and Big Data utilities to automate Big Data validation

- Ready-to-use processes such as the Infosys Big Data process assets to accelerate the testing process and the Infosys Big Data test approach to validate data movement

- Trained experts in Big Data technology and Big Data testing tools and accelerators

Infosys Big Data Service Offerings

Infosys Big Data Testing Workbench & Big Data Utilities

Big Data LAB

Data Analytics Testing

Visualizations Testing

Volume

Sources Extraction Testing

Unstructured to Structured Testing

Velocity

Big Data Validation Services

Veracity

Big Data Migration Testing

Big Data Ecosystem Testing

Variety

BI Performance Testing

BI Security Testing

Big Data Trained people

Infosys Big Data Approach & 3 Vs Framework

Service Catalogue

FUNCTIONAL TESTING

Big Data Sources Extraction Testing
- Data processing/ ETL test strategy
- Data extraction validation
- Map Reduce jobs validation
- Hive queries/ Pig jobs validation
- Data storage in Hadoop Distribution File
- System (HDFS) and NoSQL database
- (DB) validation

Data Migration Testing
- Data migration test strategy
- Source to Target (NoSQL DB/Hive/HDFS) field validation
- Data accuracy validation post migration
- Multi-source data integration validation

Big Data Ecosystem Testing
- Referential integrity checks
- Constraints check
- Metadata analysis
- Statistical analysis
- Data duplication check
- Data accuracy/ consistency check

NON-FUNCTIONAL TESTING

Performance Testing
- Performance test strategy
- Performance monitoring scripts creation
- Performance monitoring and identifying bottlenecks

Security Testing
- Security test assessment
- Role based security testing
- Default permission configuration check
- Data node and name node direct acces validation

DATA ANALYTICS TESTING

Data Analytics & Visualizations Testing
- Report objects validation (metrics and dimension objects)
- Reports validation
- Dashboards validation
- Mobile reports validation
- Visualization validation

Infosys Big Data Testing Capabilities

Enabling people through effective knowledge management	Process and 3Vs framework to validate all data touch points	Tools and accelerators to improve productivity	Alliance with Big Data solution providers
Infosys has built training frameworks that enable faster upscale. Knowledge management portals and the Infosys Big Data Lab helps users train and create proof of concepts (PoC) for specific client engagements.	Infosys has ready-to-use process assets including templates, checklists, estimation models, and the Infosys Big Data 3Vs Test Framework for Big Data testing on Hadoop architecture. Our Framework helps in • Pre-Hadoop process validation • Hadoop Map Reduce process validation • ETL process validation • Analytical reports validation	In-house utilities/ Customizable Map Reduce and Pig Latin scripting templates increase productivity by 10%. Infosys Data Testing Workbench enables automatic data quality analysis of Big Data stores and data migration testing between the EDWs and Big Data store.	Infosys has built alliances with leading Big Data solution providers, thereby enabling easy access to their tools and first-hand information on software versions and release notes. Infosys alliances include IBM, Oracle, Microsoft, HP and Informatica.
200+ strong Big Data test professionals and dedicated Big Data lab	**Templates, checklists, and best practices repository with 3Vs test framework**	**Accelerators - Infosys Data Testing Workbench and in-house utilities**	**Alliances with all leading Big Data vendors**

Business Benefits

AVOID BAD BUSINESS DECISIONS	REDUCE TIME TO MARKET	SEAMLESS INTEGRATION	REDUCE TOTAL COST OF QUALITY
Our comprehensive data quality analysis techniques ensure desirable data quality for business users to make decisions	Our customizable (Map Reduce & Pig Latin) automation scripting templates analyze filter conditions faster. This increases effort savings and reduces time-to-market by 20%	We conduct detailed study of current and new data requirements and apply appropriate data acquisition, data migration and data integration testing strategies to ensure seamless integration. This has helped businesses reduce time to market by 15%	Our in-house data conversion, data comparison and data discrepancy reporting utilities and complete Infosys IP for data quality analysis and migration testing improvetesting productivity by approximately 25%,thereby reducing the total cost of quality

SUCCESS STORIES

"A leading bank in Europe worked with Infosys to validate business rules for their anti-money laundering application powered by Hadoop Data Lake (HDFS) and Datastage ETL Tool. Infosys delivered end-to-end data validation services, thereby helping the bank's clients to achieve early test results. The Infosys solution automated workflow execution and monitoring by trigerring corresponding test sequences through Unix scripts, thereby reducing execution effort by 15%."

"A leading US-based retail client engaged with Infosys to test a Big Data implementation that would extract competitor prices on various products and provide a report to calculate a competitive price. Infosys Big Data 3Vs framework helped to achieve 97% test effectiveness and ensured zero defects on dynamic pricing workflows."

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For more information, contact askus@infosys.com

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