How can you extract high business value from Big Data? How can you get a bigger and better picture of what is happening inside and outside? NIIT Technologies can help you take complete control of your business and Big Data cost-effectively through their Big Data storage and analytics solution, Data Lake. We bring together leading Big Data experts to help you consolidate data from similar streams. Data Lake performs detailed analysis of data to give actionable insights that help deliver continual value—increased revenues and reduced cost.
Growing Need for Big Data Analytics Solution

Data is an organization’s lifeblood. Without it, an organization cannot function. However, with increasing volumes of data—customer data, transactional data, product data, loyalty data, enterprise data, operations data—the maintenance cost of the deployed infrastructure increases. It is also hard to get a comprehensive and exhaustive analysis with more than one warehouse.

Data in its raw and original form helps organizations derive new insights and information, which might not be available in structured and clean data. Events with temporal information in log files from e-commerce servers are a typical example.

Enterprise users face challenges with data quality such as duplicity, redundancy, etc.

Businesses need reservoirs that can not only contain large amounts of data from different warehouses at the same place but also offer prescriptive analytics to help them take data-driven decisions and ensure on-time service delivery. They also need time-effective processes that increase reliability and make data extraction easier.

NIIT Technologies’ Data Lake, a next-generation data storage and management solution, meets the ever-evolving needs of enterprises in today’s dynamic marketplace.

The Data Lake strategy presents a low-cost alternative to the exploding storage and processing costs of traditional platforms. It delivers an excellent methodology to ‘deposit data,’ especially semi-structured and unstructured data, when an organization is yet to determine how to access and analyze it.
Nuts and Bolts of Data Lake

The Data Lake foundation includes a Big Data repository, metadata management, and an application framework to capture and conceptualize end-user feedback. It makes Extract, Transform, Load (ETL) faster and more efficient by providing the user with the flexibility to read data as required during analysis. Data Lake enables speedy recovery of data with minimal efforts.

Key Features
- Captures and stores data streams on a large scale
- Stores different types of data in a single repository
- Defines structure of data at the time of its use
- Integrates modern analytical tools with classic statistical tools to give a comprehensive report of the insights derived from the data
- Offloads data warehouses from ETL tasks and migrates them to Data Lake as the new staging platform for data from different sources
- Performs advanced Big Data discovery analytics
- Allows user to make data transformations

Figure: Solution Architecture

The Data Lake solution comprises the following components:

Cloud Platform
- Hadoop Platform: Cloudera
- CDH (Cloudera Distribution including Apache Hadoop) components

BI, Reporting Tools
- Tableau
- ClickSense

Statistical Programming Software
- R
- SAS
Delivering More Value

- **More Cost-effectiveness:** The solution captures and stores data in a single data warehouse, making it cost-effective.

- **More Optimization:** As structured and semi-structured data is stored and managed in a single repository, data processing activities are optimized. Workloads such as data transformation and integration are performed relatively faster with this solution.

- **More Opportunities:** With accelerated analytical applications, organizations can access enterprise data in both batch and real-time modes along with the interactive mode.

- **More Insights:** The solution allows data from traditional and emerging data sources to be retained, combined, and mined in new and unforeseen ways.

- **More Ease:** An open, flexible, enterprise-grade cloud computing platform makes it easier to handle the ever-increasing sources and volumes of data and analysis functions.

- **More Nimbleness:** We offer an enterprise-ready, Open Source distribution that includes Hadoop and related projects. Hadoop components have the ability to integrate with third-party Business Intelligence and analysis tools to quickly accelerate time-to-value, maximize efficiency, and simplify data management.
The NIIT Technologies Advantage

**Domain Knowledge:** Our vast experience along with a team of dedicated subject matter experts and business analysts helps us in astutely analyzing business challenges and client requirements. Extensive domain knowledge allows us to engage and scale up our services quickly and efficiently—instilling confidence in our clients.

**Large Resource Base:** Over one-third of our organization’s resources comprise technology, domain, testing, and project management consultants/analysts. We have the ability to quickly access talent with the required skillsets and ramp up client’s teams with niche skills.

**Centers of Competence (CoC):** We have CoCs for technologies such as Java, .NET, SAP/ERP, Testing, Legacy, Cloud, Mobility, Analytics, Usability, and other areas. CoCs, as part of our charter, keep us abreast of new technologies and industry best practices. The consultants from our CoCs help our clients in overcoming technical challenges in specific situations.

**Point Solutions:** Based on our extensive experience and industry best practices, we have developed innovative, domain-specific, and quick-to-deploy solutions on latest technologies in key business areas.
NIIT Technologies is a leading global IT solutions organization, enabling its clients to transform at the intersect of unparalleled domain expertise and emerging technologies to achieve real-world business impact. The Company focuses on three key verticals: Banking and financial services, Insurance, Travel and Transportation. This domain strength is combined with leading-edge capabilities in Data & Analytics, Automation, Cloud, and Digital. With over 10,000 employees serving clients across Americas, Europe, Asia, and Australia, NIIT Technologies fosters a culture that promotes innovation and constantly seeks to find new yet simple ways to add value for its clients. Learn more about NIIT Technologies at www.niit-tech.com