



DATA ARCHITECTURE OPTIMIZATION

Capturing New Data-Driven Mission Insights, While Lowering the Cost of IT Infrastructure

THE CHALLENGE

Public sector organizations face complex challenges moving, managing, and extracting actionable intelligence from their multiple data sources. Agencies must deal with the realities of existing data architectures and the pressures of budget constraints. What practical steps can agencies take to transform their data challenges into positive outcomes?

A NEW APPROACH: DATA ARCHITECTURES EVOLVE TO MAKE POSSIBLE NEW MISSION OUTCOMES

Data Architecture Optimization describes an approach to apply Apache Hadoop® and related open source technologies to make data architectures capable of realizing new and improved mission outcomes, while driving significant cost out of the IT budget.

Hortonworks Data Platform (HDP®), built on Hadoop, offers the ability to capture all structured and emerging types of data, keep it longer, and apply traditional and new analytic engines to drive value, all in an economically feasible fashion.

Organizations are breathing new life into Enterprise Data Warehouse (EDW)-centric data architectures by integrating HDP to take advantage of its capabilities and economics.

OPTIMIZE YOUR DATA ARCHITECTURE WITH HORTONWORKS DATA PLATFORM (HDP)

For years, the EDW has been the core foundation on which analytics are built within the enterprise. As data volumes and varieties grow, so do the costs. Often agencies struggle to validate the cost of storing data against the value provided. This creates a need for new agile tools, but also for an integrated ecosystem solution.

As an answer to the challenges of cost, complexity, and expansion, agencies are turning to Hortonworks to modernize their data architectures while enhancing the value of existing EDW implementations.

ARCHIVE, ONBOARD, AND ENRICH

Leveraging Hadoop to build a modern data architecture allows agencies to take practical steps to support the new demands of rapidly growing volumes and varieties of data. These steps include creating an active archive, onboarding ETL processing, and enriching the data architecture with new data sources.

"HDP® has helped democratize data in the DoD, enabling a much larger part of the organization to move our mission forward. Hortonworks was the glue that kept our ecosystem together and allowed us to focus on our mission." – JIDO

“When our team ran into an issue, your support team was unbelievable. During an evaluation between your distribution and other vendors, you gave us code that we could give to the other vendors to help them out. The competitors didn’t do that... I want Hortonworks because they have the ability to get the job done.” – DoD Customer

This provides several benefits:

- **Archive Data in Hadoop** – Moving cold or rarely used data to Hadoop as an active archive reduces costs while expanding the amount of history that can be maintained.
- **Onboard ETL Processes to Hadoop** – Implementing ETL processes in Hadoop allows you to perform and reduce costly data movement.
- **Enrich the Value of your EDW** – Using Hadoop to refine new data sources, such as web and machine data, allows agencies to make use of data they considered too big to store and process.

A DATA ARCHITECTURE OPTIMIZED WITH APACHE HADOOP

With Hadoop, the data architect can cut costs associated with the data architecture while extending new analytic value to the agency. Hadoop provides linear scale storage and compute so that it can scale to meet the needs of new data sources and more advanced workloads and data science methods. The benefits of this new architecture include the ability to:

- Move rarely used data to Hadoop. Access it on demand, saving on storage costs.
- Store more data longer to enhance analytics with deeper information and better results.
- Store and process new data sources. Feed transformed data into your EDW to augment or create new analytic value.
- Onboard ETL processes in Hadoop to take advantage of compute and operational efficiencies.

HORTONWORKS DATA PLATFORM

Evolving the data architecture with HDP lets you store and analyze data at massive scale, extract insights from all data types from any source, power proactive decision-making through predictive analytics, and maximize tax payer dollars. HDP is architected to integrate deeply with existing data center technology and includes a comprehensive set of capabilities including data management, data access, data governance and integration, security, and operations. Plus, HDP is developed entirely in the open community – take advantage of rapid community innovation and deep integration across the ecosystem, while avoiding proprietary lock-in.

USE CASES

Several data-driven organizations have captured new business insights, while lowering the cost of their IT infrastructure by leveraging Hadoop and HDP.

National Education Authority

An overseas national education authority wanted to better understand constituent views. Data analysts spent hours sifting through blogs, tweets and chat sessions to capture citizens’ opinions about state-funded education. Now, the team uses HDP to produce daily reports that are more thorough, objective and quantitative than the previous ad hoc reports. The raw data provides detail into local sentiment, down to the individual.

To learn more, visit
[www.hortonworks.com/
solutions/public-sector/](http://www.hortonworks.com/solutions/public-sector/)
or call (855) 8-HORTON

