CLOUDERA

SOLUTION BRIEF

Unlock Healthcare Innovation with Private AI and Open Standards

Unlocking AI Innovation for Healthcare

AI has the power to advance healthcare by decades. Federal agencies, clinical practices, public sector health programs, and research centers can use AI to detect disease outbreaks faster, identify at-risk patients earlier, prevent fraud, and drive research that saves lives.

While the data to do all of this already exists, what organizations lack is a platform that can unify data, govern it, and use AI on it in environments where security and compliance are paramount. Cloudera works with the data environment you already have, helping you accelerate healthcare outcomes with secure, governed AI.

Solving Healthcare Challenges with Real-World Data

Healthcare data is scattered across electronic healthcare records (EHR) systems, lab platforms, claims databases, internet of things (IoT) medical devices, genomics repositories, research tools, and legacy systems that have been running for decades. Cloudera Data Flow, powered by Apache NiFi, ingests data from all of these sources in real time, across hybrid environments, routing and processing it into unified, analytics-ready pipelines. The result is meaningful centralization of data: governed, secure, ready to act on, ready for AI.

At a Glance

Cloudera brings AI to your data anywhere it lives—on-premises, in the cloud, or across hybrid environments—with the security and governance regulated healthcare demands.

- **Certifications:** FedRAMP Moderate, GovRAMP Moderate, TX-RAMP Level 2, and FISMA compliant
- **Compatibilities:** HIPAA-ready and Zero Trust compatible
- **Deployment:** On-premises, cloud, multi-cloud, edge, and hybrid environments
- **Private AI:** Your models, based on your data, controlled within your secure enclave
- **Real-time data ingestion** with Cloudera Data Flow, powered by Apache NiFi
- **No vendor lock-in:** Open standards, open formats, open-source foundation

Use Cases

Cloudera helps healthcare organizations—from federal agencies to hospital networks and research institutions—meet their mission and solve their biggest challenges. Customers use Cloudera for a wide-range of use cases, such as:

Disease Surveillance and Outbreak Response

Ingest and analyze real-time data from labs, hospitals, and public health partners to detect emerging outbreaks, model spread patterns, and direct vaccines and resources where they're needed most. Cloudera's unified pipelines cut the time between data arrival and actionable insight, compressing outbreak response from weeks to days and giving public health leaders a real-time operational picture across jurisdictions.

IoT Telemetry and Medical Device Monitoring

Continuously monitor connected medical devices, generate real-time alerts, and flag patients for clinical follow-up before conditions escalate. From hospital-floor equipment to remote wearables, teams use Cloudera to ingest and process device streams at scale, so care teams get the signal they need, when they need it.

Fraud Detection

Cross-reference provider billing patterns and patient activity across systems to identify duplicate billing, misclassification, and prescription abuse at scale. Cloudera helps agencies run machine learning models directly against their unified data estate to surface anomalies that siloed systems would never catch.

Genomics Research Modernization

Centralize large-scale sequencing data and apply advanced analytics to accelerate research into the genetic causes of disease. Cloudera's open data lakehouse, powered by Apache Iceberg, handles the volume and complexity of genomic datasets at scale to power both real-time pathogen detection for public health preparedness and longer-term research into the genetic origins of disease.

Suicide Risk Prevention

Deploy machine learning models that draw on EHR data, behavioral indicators, and clinical notes to identify at-risk individuals and enable preventive intervention. By unifying data sources that have historically lived in separate systems, including unstructured inputs like therapist notes, Cloudera gives care teams a more complete picture of patient risk earlier in the care journey.

EHR Integration and Clinical Analytics

Parallel-ingest data from multiple EHR systems—Epic, Oracle Health (formerly Cerner), and others—into a unified data lake that powers real-time dashboards, reporting, and downstream research across large, complex health networks. This helps ensure complex data transitions, such as hospital mergers and system migrations, are absorbed seamlessly, with governance and lineage intact from day one.

Built for Regulated Environments

Healthcare organizations operate under more demanding security and compliance requirements than any other industry, and it's critical that your data and AI platform can enable you to meet regulatory standards and run in your existing environment. Cloudera holds FedRAMP Moderate, GovRAMP Moderate, and TX-RAMP Level 2 authorizations, is designed for Zero Trust architectures and FIPS 140-2, and is configurable to support FISMA compliance.

That same security-first design extends to AI. Cloudera's Private AI capability runs models and agentic workflows entirely within your organization's secure enclave. **No data leaves your environment.** You get full lineage and auditability over every model input and output. That level of control makes AI deployable in environments where protected health information is at stake.

- **Consistent security and governance:** Cloudera Shared Data Experience (SDX) enforces unified security, governance, and metadata policies across cloud, data center, and edge.
- **Open data lakehouse:** A zero-ETL, zero-data-copy architecture powered by Trino enables federated querying across your entire data estate without moving or duplicating data.
- **Dashboard and BI integrations:** Connects directly to tools like Power BI, Tableau, and Qlik to provide unified, governed data without retraining staff or renegotiating enterprise agreements.

Open Standards, Always

Cloudera's open standards foundation also means **your organization retains full ownership and control of its data at all times**, in your own networks and enclaves, regardless of what's running on top of it, with no vendor lock-in. Our commitment to open data formats gives you the freedom to build and keep your data strategy uniquely yours.

Use Your Data the Way You Want to Meet Your Goals

Healthcare organizations need a platform that meets them where they are: in regulated environments and across hybrid infrastructure with data that's too sensitive to expose and too valuable to leave siloed. Whether you're a federal agency managing population health, a hospital network absorbing years of merger data, or a research institution working to find breakthroughs by leveraging existing data, Cloudera brings it all together in a secure, open, AI-ready foundation.

Ready to See What's Possible?

Schedule a secure strategy session or mission-focused demo to explore how Cloudera can modernize your healthcare data environment. Email: Cloudera@Carahsoft.com

FedRAMP GovRAMP TX-RAMP CERTIFIED

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Cloudera is the only hybrid data and AI platform company that large organizations trust to bring AI to their data anywhere it lives. Unlike other providers, Cloudera delivers a consistent cloud experience that converges public clouds, on-prem data centers, and the edge, leveraging a proven open-source foundation. As the pioneer in big data, Cloudera empowers businesses to apply AI and assert control over 100% of their data, in all forms, improving security, governance, and real-time and predictive insights. The world's largest brands across all industries rely on Cloudera to transform decision-making and ultimately boost bottom lines, safeguard against threats, and save lives.

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