

Delivering Consistent Data Context for True Hybrid and Multi-Cloud

Cloudera shared data experience

Organizations today need to leverage growing volumes of data to drive operational efficiency and more impactful customer experiences. However, delivering analytics and AI on trusted data in highly fragmented IT ecosystems is challenging. Most data teams are managing a complex assortment of legacy and cloud data warehouses and data lakes, with no easy way to unify and analyze it all. In a hybrid and multi-cloud world, organizations need data context — a single, consistent way to manage and maintain data access and governance policies across all users, analytics, and deployments.

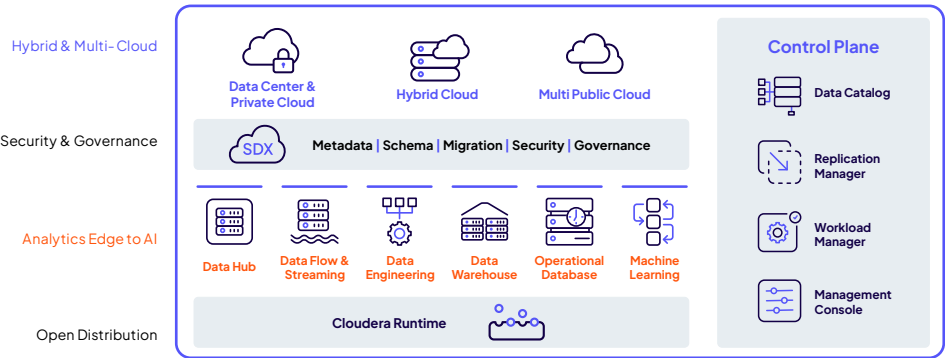
A critical part of Cloudera's platform, Shared Data Experience (SDX), is Cloudera's integrated set of security and governance capabilities built on metadata and delivering consistent context across all analytics and public as well as private clouds. An intrinsic part of Cloudera, SDX reduces security risk and operational costs by delivering consistent data context across deployments. Multi-tenant data access and governance policies are set once, and automatically enforced across the data lifecycle in hybrid as well as multi-clouds. With these, organizations can deploy fully secured and governed data lakes faster.

Business Impact of Consistent Context

- Improved
- Self-service data access
 - Business agility and insight
 - Governance and compliance
- Reduced
- Security and business risk
 - Operational costs and overheads

“SDX is foundational in how we track, govern, and protect our data.”

TERRY KLINE
CEO, Navistar



Secure By Design

SDX data context architecture ensures Cloudera is secure by design, unlike the approach taken by other vendors where security is an afterthought or bolt on. As a result, organizations can make new data available at speed and without compromise. SDX delivers comprehensive security right out of the box for data lakes as they are deployed and data as it is used.

SECURE PLATFORM DEVELOPMENT		SECURE DATA ACCESS	
Identities: Manage adding enterprise users and groups to multi-tenant clusters		SSO: LDAP based authentication & authorization for services' web UIs.	
Network: Configure Kerberos based authentication, TLS wire encryption, DNS and proxies for web interfaces		Authorization: Manage data access on multi-tenant clusters with tag based policies	
Storage encryption: Enable encrypted data at rest across the platform		Lineage and Audit: Access unified persistent audit and lineage across all clusters (transient or persistent, single or multi-user)	
		Data stewardship: Discover, profile, curate and tag datasets with business context	

Key Features And Benefits

KEY FEATURE	BENEFIT
Insightful metadata	Trusted, reusable data assets and efficient deployments need more than just technical and structural metadata. Cloudera's Data Catalog provides a single pane of glass to administer and discover all data, profiled and enhanced with rich metadata that includes the operational, social and business context, and turns data into valuable information.
Powerful security	Eliminate business and security risks, and ensure compliance by preventing unauthorized access to sensitive or restricted data across the platform with full auditing. SDX enables organizations to establish multi-tenant data access with ease through standardization and seamless enforcement of granular, dynamic, role- and attribute-based security policies on all clouds and data centers.
Full encryption	Enjoy ultimate protection as a fundamental part of your Cloudera installation. Clusters are deployed and automatically configured to use Kerberos and for encrypted network traffic with Auto-TLS. Data at rest, both on-premises and in the cloud, is protected with enterprise-grade cryptography, supporting best practice tried and tested configurations.
Hybrid control	Meet the ever-changing business needs to balance performance, cost and resilience. Deliver true infrastructure independence. SDX enables it all with the ability to move data, together with its context, as well as workloads between Cloudera deployments. Platform operational insight into aspects like workload performance deliver intelligent recommendations for optimal resource utilization.
Enterprise grade governance	Prove compliance and manage the complete data life-cycle from the edge to AI and from ingestion to purge with data management across all analytics and deployments. Identify and manage sensitive data, and effectively address regulatory requirements with unified, platform-wide operations, including data classification, lineage, and modeling.

Accelerating Data-Driven Insights

SDX enables a host of functional use cases, delivering tremendous business value by unlocking the insight data holds.

Automatic Data Profiling

With data volumes of any type exploding, quickly making new data available to end users lets organizations capitalize on the flood of information. The limiting factor is the time taken to understand the data. SDX automatically profiles new data as it arrives to build insight and classify sensitive information, triggering the appropriate access policies and ensuring corporate standards and compliance are always met.

Easy, Secure Data Access

Innovation and digital transformation require organizations to uncover insight and value from their data at scale. The key enabler is providing all users access to all data and analytics to experiment and implement new use cases. SDX delivers consistent security and governance for multi-tenant data access across all deployments, marrying free access with complete safety and compliance.

Regulatory Compliance

Regulatory compliance (e.g. GDPR and CCPA) demands a modern data architecture that decreases business and security risks stemming from ever-changing data privacy requirements. SDX lets organizations identify and manage sensitive data for compliance without disruption to business processes whilst also providing consistent security and governance transparently across all data and deployments.

Visit us on our website and learn more: cloudera.com/products/sdx.html



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Cloudera is the only true hybrid platform for data, analytics, and AI. With 100x more data under management than other cloud-only vendors, Cloudera empowers global enterprises to transform data of all types, on any public or private cloud, into valuable, trusted insights. Our open data lakehouse delivers scalable and secure data management with portable cloud-native analytics, enabling customers to bring GenAI models to their data while maintaining privacy and ensuring responsible, reliable AI deployments. The world's largest brands in financial services, insurance, media, manufacturing, and government rely on Cloudera to be able to use their data to solve the impossible—today and in the future.

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