

Zero Trust Privilege for Cloudera

Securing Cloudera Enterprise Leveraging Active Directory

The Centrify Zero Trust Privilege solution for Cloudera Enterprise is an enterprise-class offering that makes securing even the most complex Cloudera environments simple and straightforward by connecting your enterprise data hub to your existing Active Directory infrastructure. The result is enterprise-wide authentication, access control, privilege management, auditing and secure machine-to-machine communications which includes your Cloudera clusters, nodes and services.

High-value Data Carries High-risk Potential

The Big Data market is exploding — one analyst says it will grow from \$2 billion in 2013 to over \$50 billion in 2020 — and Cloudera is a clear leader in providing Big Data infrastructure powered by Apache Hadoop. Creating an enterprise data hub with Cloudera enables businesses to realize pervasive analytics with a single, central system to store, access, process, secure and analyze all data.

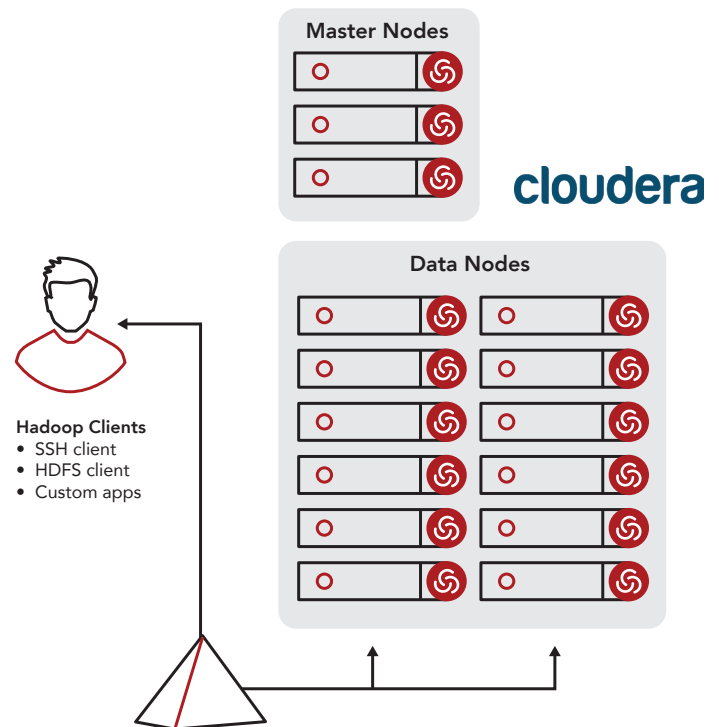
Solutions that store sensitive and business critical data including customer, financial and personally identifiable information (PII), need to be governed by corporate security and compliance policies. Only users with a business need should access Cloudera's enterprise data hub, least privilege should be enforced, and activity should be audited to satisfy regulatory compliance requirements such as PCI, SOX, HIPAA, NERC/FERC and FISMA.

Big Data solutions present tremendous opportunity for enterprises across industries, and at the same time introduce major net new infrastructure. To realize the true value of Big Data, businesses need to focus on establishing their enterprise hub powered by Cloudera and not on building parallel and non-standard identity management infrastructures to secure Hadoop.

Secure Enterprise Data Hub

Cloudera provides powerful solutions to manage perimeter, data and access security. Centrify complements and extends Cloudera's security by simplifying authentication, access controls, privilege management and auditing in even the most complex Hadoop environments.

Centrify Zero Trust Privilege Services leverage existing investments in Active Directory to provide centralized identity management and auditing across the entire enterprise, which includes Hadoop clusters, nodes and services. The result is an easy and cost-effective way of deploying Hadoop in secure mode by leveraging existing Active Directory skillsets and infrastructure, auto-join capabilities for nodes and automated configuration of Hadoop service accounts.



How It Works

Centrify Zero Trust Privilege Services seamlessly integrate the nodes in the cluster into Active Directory for user authentication leveraging centralized access controls defined within Active Directory. Centrify Server Suite also automates the configuration of Hadoop in secure mode centrally, from the name node. Centrify generates service accounts within Active Directory and distributes service account credentials across all nodes. This central management of service accounts simplifies running Hadoop in secure mode.

The Hadoop data nodes can be auto-joined to Active Directory using tools that automate the process of installing Centrify software and integrating servers with Active Directory. Hadoop administrators and big data analysts benefit from simplified access to the Hadoop cluster, as they leverage single-sign on to the cluster and across nodes using their standard Active Directory credentials. Centrally managing user accounts in Active Directory eliminates the need to create multiple identities for users and ensures a “one user, one identity” framework that strengthens security, lowers IT costs and streamlines your organization.

Centralizing identity management across your enterprise including Hadoop clusters, nodes and applications with Centrify makes it possible to deploy a truly cross-platform solution for consistently managing not only authentication, but also for managing who has privileged access to data and auditing what they are doing with it.

Centrify + Cloudera Enterprise

By leveraging Centrify Zero Trust Privilege Services, Cloudera customers can:

- **Rapidly deploy Cloudera Enterprise in secure mode**
Centrify enables Cloudera Enterprise to run in secure mode by enforcing authentication for users and administrators via your existing identity management infrastructure — Active Directory.
- **Simplify user access to Cloudera clusters through Active Directory-based single sign-on**
By extending Active Directory’s Kerberos and LDAP capabilities to Hadoop clusters, Centrify leverages existing Active Directory-based authentication for Hadoop administrators and end users. This increases user productivity and enhances security as users log in as themselves rather than through shared privileged accounts.
- **Establish regulatory compliance through least privilege policies and user activity auditing across the cluster**
Centrify helps Cloudera customers eliminate the use of root privileges by enabling per command privilege elevation or whitelisted restricted shell. Centrify audits user access to Hadoop clusters, records user session activity, centrally stores session recordings and ensures accountability through correlated activity across the cluster.
- **Secures machine-to-machine communications across your nodes in your cluster for enhanced security.**
Centrify automates Cloudera Enterprise service account management. Centrify not only secures user identity but also system and service account identity.

The Centrify and Cloudera Partnership

Cloudera is revolutionizing enterprise data management by offering the first unified Platform for Big Data, an enterprise data hub built on Apache Hadoop. Centrify is redefining the legacy approach to Privileged Access Management by delivering cloud-ready Zero Trust Privilege to secure modern enterprises and stop the leading cause of breaches — privileged access abuse. Centrify and Cloudera have partnered to provide a solution that addresses the identity management and audit needs for the most complex Cloudera deployments, without introducing new identity management infrastructure.



The Centrify solution is Cloudera Certified, thereby ensuring compatibility between the Centrify Zero Trust Privilege Services and Cloudera Enterprise. Centrify and Cloudera have also established an integrated technical support process for customers.

Our mission is to stop the leading cause of breaches – privileged access abuse. Centrify empowers our customers with a cloud-ready Zero Trust Privilege approach to secure access to infrastructure, DevOps, cloud, containers, Big Data and other modern enterprise use cases. To learn more, visit www.centrifys.com.

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