

# Identity and Access Management for MapR

## Securing MapR Enterprise Leveraging Active Directory

The Centrify Server Suite solution for MapR is an enterprise-class offering that makes securing even the most complex MapR environments simple and straightforward by connecting your MapR Distribution including Apache Hadoop 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 MapR 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 MapR is a leader in providing big data infrastructure powered by Apache Hadoop. Creating an enterprise grade distributed data platform with MapR 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 MapR clusters, least privilege should be enforced, and activity should be audited to satisfy regulatory compliance requirements such as PCI, SOX, HIPAA, NERC/FERC and FISMA.

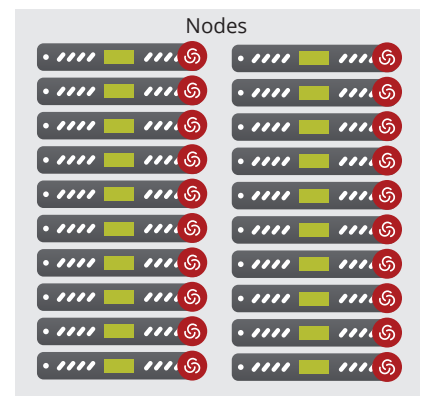
Big data solutions present tremendous opportunity for enterprises across industries, and at the same time introduce major net new infrastructure. To realize the true value of big data, businesses need to focus on establishing their MapR Distribution including Apache Hadoop environment and not on building parallel and non-standard identity management infrastructures to secure Hadoop.

### Secure MapR Distribution including Apache Hadoop

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



- Hadoop Clients**
- SSH client
  - HDFS client
  - Custom apps



### How It Works

Centrify Server Suite seamlessly integrates the nodes in the cluster into Active Directory for user authentication leveraging centralized access controls defined within Active Directory. Centrify 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 and ensures the continued management of the Kerberos environment required for 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 systems and their data as well as auditing what they are doing on the nodes.

## Centrify + MapR

- **Secure and simplify Hadoop environments without the hassle of deploying and managing new identity infrastructure.** Centrify makes it simple to run the MapR Distribution including Apache Hadoop in secure mode by leveraging your existing identity management infrastructure—Active Directory—without the hassle of introducing parallel solutions that may not scale and are not enterprise ready. You also save money by leveraging existing skillsets.
- **Delivers single sign-on for IT admins and MapR users to increase productivity and security.** By extending the power of Active Directory's Kerberos and LDAP capabilities to your Hadoop clusters, Centrify delivers authentication for MapR administrators and end users.
- **Secures machine-to-machine communications across your nodes in your cluster for enhanced security.** Centrify automates MapR service account management. Centrify not only secures user identity but also system and service account identity.

- **Mitigate threats resulting from identity-related risks as well as address compliance and audit requirements.** The reality is that MapR stores most if not all of your organization's most important data. Centrify controls access, manages privileges, audits activity and associates everything back to an individual thereby making your data more secure. Centrify also delivers cost-effective compliance through reporting on who has access and who did what across Hadoop clusters, nodes and services.

## The Centrify and MapR Partnership

MapR delivers on the promise of Hadoop with a proven, enterprise-grade platform that supports a broad set of mission-critical and real-time production uses. MapR brings unprecedented dependability, ease-of-use and world-record speed to Hadoop, NoSQL, database and streaming applications in one unified distribution for Hadoop.

Centrify is revolutionizing identity management by addressing the needs of both end users and privileged users across data center, cloud and mobile environments. Centrify and MapR have partnered to provide a solution that addresses the identity management and audit needs for the most complex MapR deployments, without introducing new identity management infrastructure.



The Centrify solution is MapR Certified, thereby ensuring compatibility between the Centrify Server Suite and the MapR Distribution including Apache Hadoop. Centrify and MapR have also established an integrated technical support process for customers.

## How to Get More Information

For more information on the Centrify and MapR partnership, visit <http://www.centrif.com/mapr>



Centrify provides **unified identity management** across data center, cloud and mobile environments that result in single sign-on (SSO) for users and a simplified identity infrastructure for IT. Centrify's unified identity management software and cloud-based **Identity-as-a-Service (IDaaS)** solutions leverage an organization's existing identity infrastructure to enable **single sign-on**, multi-factor authentication, privileged identity management, auditing for compliance and enterprise mobility management.

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