Clearsense Gains 50x Faster Backups and File Sharing, Adds Hadoop Backup With Cohesity

Clearsense®

INDUSTRY
Healthcare

USE CASES
Backup and Recovery, Disaster Recovery, File Services

COHESITY SOLUTIONS
DataProtect, SmartFiles

TECHNOLOGY PARTNERS
Nutanix

WORKLOADS
Hadoop, Nutanix AHV

CHANNEL PARTNER
EVOTEK

Key Benefits

- Up to 70% improvement in deduplication and compression rates
- Peace of mind that a full backup takes just four hours
- Cost avoidance savings of hundreds, if not millions of dollars as data grows
- Ability to quickly add to clusters without downtime

Systems and wearables that regularly capture healthcare data have the potential to improve patient outcomes by shifting the focus to preventative medicine as opposed to just treating existing illnesses. Clearsense is turning that vision into reality using distributed Hadoop databases to bring big data into healthcare. The Clearsense platform integrates data from any source and connects it to existing business intelligence tools to unlock value for clinical, operations, financial, and research users. Clearsense deployed Cohesity for integrated, comprehensive data protection of traditional and modern data sources, including Hadoop Distributed File System (HDFS), HBase and Hive data, Nutanix, and physical, bare metal servers, file sharing, and disaster recovery (DR)—improving data management speed and performance.

Challenges

Healthcare data has expanded exponentially due to electronic medical record mandates, the growing use of physiological monitors (e.g., ventilators and smart pumps), and personalized medical applications and services. Until Hadoop, there was no database available to collect all of the various signals and dynamically apply schema the way Clearsense envisioned before serving up the data on demand for various use cases.

As the company progressed toward delivering its first advanced data science solution for healthcare using Hadoop, it realized it also needed a way to protect its modern data workloads against cyber threats. However, the Veeam product it was using for backups was not robust enough to handle the requirements. For example, it was unable to back up Hadoop and lacked the speed and reliability to efficiently perform on-premises backups and support DR—both of which are needed for compliance and as a best practice to avoid data loss and to meet client service-level agreements (SLAs). The legacy product was also difficult to use and data compression rates were unacceptable.

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"We use the Cohesity data management solution for both our traditional and modern data sources to make backups of AHV and Hadoop workloads as well as disaster recovery, and file sharing much more expedient. We'll avoid spending thousands, if not millions of dollars, as data grows."

Charles Boicey, MS, RN-BC, Co-Founder and Chief Innovation Officer, Clearsense

Clearsense sought a better data management solution to help it put the wide variety of data at providers' fingertips that U.S. healthcare organizations are legally required to retain for up to seven years after the last care episode. It needed to offer enterprise-class backup, recovery and data management for modern Hadoop workloads for seamless integration into the innovative platform that helps providers determine real-time treatment or model scenarios about who is most likely to enter various pathways from Type 2 diabetes and hypertension to more critical sepsis and now even Covid-19.

"From a clinical to operational research, healthcare organizations have 150 to 300+ or more systems. Because information is in silos, data scientists lose precious time, waiting weeks or months in a virtual line to get data from each system by requesting it from each application owner. That's inefficient," explains Charles Boicey, Clearsense's Co-Founder and Chief Innovation Officer. "Our solution, which consolidates all of that data in a single environment for healthcare data scientists to not only access but build models and perform analysis using existing tools and skill sets to drive real-time insights, must have efficient data management."

Solution

Clearsense chose the modern, scale-out Cohesity data management solution because it met all of the backup and recovery requirements for traditional and modern data sources that Veeam could not, scaling both data flows and data storage. Cohesity supports Hadoop, fast backup and recovery at a logical database level rather than just individual Hadoop nodes, and is simple to use. Deploying Cohesity was easy, approximately a half-day staff time investment, and anyone can quickly schedule new virtual machines (VMs) or Hadoop databases to be backed up.

Today, the innovator has about a petabyte of storage to back up and protect hundreds of terabytes of HDFS, HBase and Hive data, Nutanix, and physical, bare metal servers with Cohesity. Cohesity's data-aware, semantic dedupe eliminated redundant data to provide high space efficiency, effectively reducing the backup storage footprint from the 1 PB it estimated to 300 TBs. Another 300 TBs is replicated to a remote data center for Disaster Recovery.

"What I really like about Cohesity is that it performs immediate backups locally and pushes the data to DR," says Jeff Kaden, director of Infrastructure and Security at Clearsense. "Cohesity is efficient, taking advantage of all of the power of our networking and hardware to speed backups. It also scales impressively, pretty much to the nth degree based on rack space."

Clearsense also has expanded its use of the converged Cohesity platform for storing production file and object data. After achieving benefits with backup, Clearsense rolled out Cohesity SmartFiles capabilities for data-centric file sharing, lowering its costs. The healthcare innovator now manages all of its data that does not need to reside on a high IOPS platform in Cohesity and expects its data volume to expand at least threefold in 18 months. Cohesity is also integrated into Clearsense staging and testing environments.

"The ability to pay as you grow, stacking Cohesity clusters or nodes on each other for faster processing is a huge advantage for our environment," says Kaden. "Internally, we do a lot of data processing and pipeline work so from those perspectives, Cohesity is a much more cost-efficient place to land our data than Nutanix," adds Boicey.

Results

Clearsense is in the business of empowering healthcare teams with data. By teaming with Cohesity, it has simplified and is accelerating the delivery of critical data to achieve client SLAs. Unlike Veeam, the comprehensive Cohesity platform backs up modern Hadoop workloads at impressive speeds.

Looking ahead, Clearsense intends to build out components of robotic process automation (RPA) in a healthcare-centric data pipeline. The company views the Cohesity platform as a strategic advantage, serving as an ideal landing for data files between various RPA processes because of its speed and cost-efficiency.

COHESITY

Clearsense is achieving the following benefits with the Cohesity data management solution

- 50x faster backups compared to Veeam, including Hadoop workloads

- Up to 70% improvement in deduplication and compression rates

- Peace of mind that a full backup takes just four hours

- Ability to quickly add to clusters without downtime

- Cost avoidance savings of hundreds, if not millions of dollars as data grows

About Clearsense

Clearsense LLC is enabling healthcare providers to accelerate transformative change while reducing business expense. Ingesting, cleansing, organizing and analyzing data from any clinical, financial or operational source, the company delivers next-generation flexibility and deeper insights to help healthcare organizations proactively treat patients and drive down the cost of care.

COHESITY

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