AMD insures against disaster with continuous replication

Millions of people depend on systems powered by AMD's advanced CPU, GPU and other processor technologies. To protect its data-driven manufacturing operations from the threat of tornado season, AMD looked for a disaster recovery solution that it could deploy in the cloud quickly and with minimal operational impact. AMD selected Cirata to enable continuous replication to a Microsoft Azure instance without disruption, ensuring geo-redundancy.

Challenge

Any interruption to AMD's critical systems could disrupt manufacturing processes, seriously impacting profit. How could AMD protect its vital data in the case of an unplanned outage?

Solution

AMD deployed Cirata to handle continuous replication of critical business data to the Microsoft Azure cloud, enabling rapid business continuity with near-zero RPO.

Company overview

AMD (NASDAQ: AMD) is a leading manufacturer of high-performance computing, graphics, and visualization technologies for gaming, immersive platforms, and data centers. Hundreds of millions of consumers, leading Fortune 500 businesses, and cutting-edge scientific research facilities around the world rely on AMD technology daily to improve how they live, work, and play. Headquartered in Santa Clara, California, the company employs 8,900 people.

Results

- Protects vital business and manufacturing processes from disruption in the event of a disaster at AMD's production data center.
- Ensures no data will be lost in the event of a switchover from the on-premises site to the disaster recovery environment.
- Enables future transition to a hybrid cloud architecture for increased operational cost efficiency.

"The threat of natural disaster was a trigger for us to get serious about developing a robust business continuity strategy. With Cirata, we can automate replication for disaster recovery, eliminating the difficulty and potential error of manual backup, and ensure we operate from current data at all times."

Ajay Prasad, AMD Big Data Leader

Ever-present threats

In the age of cloud-enabled global business, it's easy to forget that even the most innovative companies still depend on systems based in a single location. If disaster strikes a data center, it can have a serious impact.

AMD faced an extreme version of this problem: the data center that supports its manufacturing processes is located in a tornado area, and any downtime threatened significant disruption to its finely tuned operations. In preparation for tornado season, the company looked for a geo-redundancy solution to help it to keep its systems online and reduce the risk to its manufacturing processes.

To increase geo-redundancy, AMD had begun to pursue a hybrid cloud strategy, which included Azure Data Lake Storage and Azure HDInsight. However, AMD's use of these solutions was limited, as taking production systems offline to transfer data to the cloud was not an option. With tornado season approaching, AMD looked for a way to replicate its critical data to the Azure cloud without interrupting day-to-day business operations.

Whirlwind transition

As a first step, the company deployed Cirata to synchronize its critical business data to an Azure Data Box. Cirata replicated the data without requiring system downtime, enabling AMD to operate its business systems as usual during the process. AMD then shipped the Data Box to Microsoft to upload to the Azure cloud, and re-engaged Cirata to automatically synchronize data that had changed during the shipping process—again, without impacting production systems.

Cirata now replicates data automatically to the Azure environment, ensuring complete consistency between the on-premises data center and the Azure cloud systems. If the data center is unavailable because of planned or unplanned downtime, service can automatically continue from the Azure environment, without interruption. And because Cirata manages replication continuously, applications can access current data regardless of location, enabling seamless business operations.

> "We wanted a solution to go live in an incredibly short timeframe. Cirata provided us with the perfect way to secure our business from disruption."
>
> *Ajay Prasad, AMD Big Data Leader*

Solid foundation for the future

With continuous data replication from Cirata, AMD has enabled near-zero RPO in a recovery scenario. AMD has currently deployed Cirata to enable one-way replication from the on-premises data center to the Azure cloud. If AMD fails over to Azure and then wants to switch back to the on-premises site, Cirata will automatically ensure that data is consistent at both locations when the on-premises environment comes back online.

In the future, AMD plans to upgrade its data lake platform to Hortonworks Data Platform (HDP) 3.0. Using Cirata, AMD will be able to migrate production data to the new environment while the HDP 2.6 platform continues to run, and ensure that the data is consistent on both the old and the new platforms. When the HDP 3.0 platform is ready, AMD will be able to switch it into production immediately, without downtime or interruption to the business.

The deployment of Cirata is predicated to deliver additional benefits to AMD in the future, as it will facilitate a smooth transition to a hybrid cloud environment. By using Cirata to enable a hybrid cloud architecture, AMD would gain the flexibility to scale out cost-effectively in the cloud at will—with the guarantee of consistent data, available everywhere.

> "Cirata provides AMD with consistent data in real time across our cloud and on-premises solutions, offering near-zero RPO and enabling hybrid cloud agility to drive the business forward."
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> *Ajay Prasad, AMD Big Data Leader*