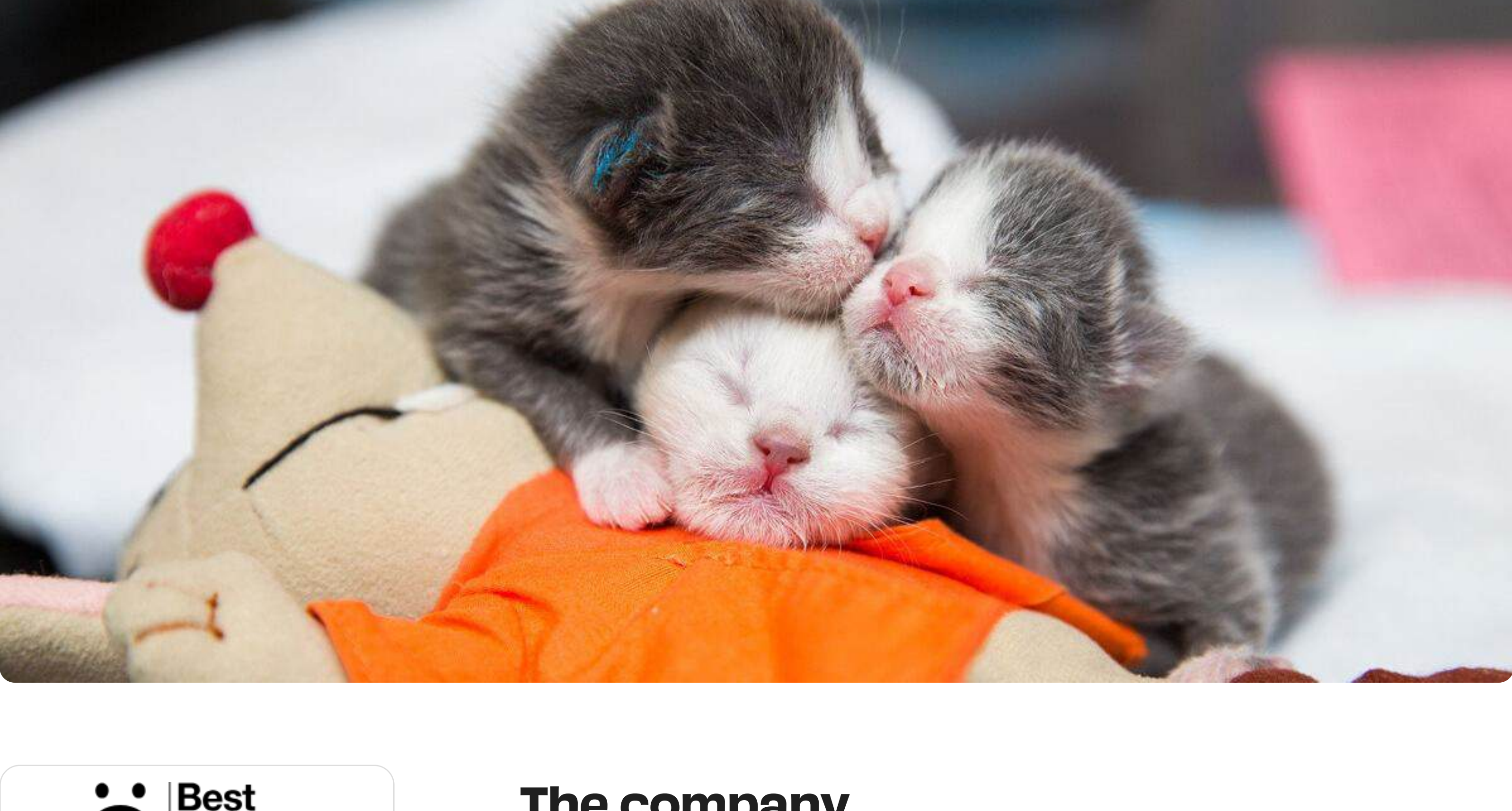# Accessing critical AWS data in real-time to save lives — with N2W

With N2W, Best Friends reduced the time needed to sync workloads—what used to take days now takes minutes—allowing them to focus on innovation.

Best Friends

CHALLENGE

Best Friends Animal Society (BFAS) began executing data-driven strategy across the organization and, given its performance and scalability needs, decided to migrate many of its critical applications to AWS. Because of its applications' business-critical nature and the organization's quickly growing footprint, the BFAS team needed to find a suitable backup solution for the application and its data.

SOLUTION

Using AWS Marketplace, BFAS decided to do a 30-day demo of the N2W solution on AWS, a product that expands on AWS-native snapshot technology to provide a holistic, end-to-end backup and disaster recovery data protection solution. Today, N2W provides BFAS with a 1-click, cross-account and cross-region disaster recovery solution, securely copying backups between multiple AWS Regions and Availability Zones (AZs).

BENEFIT

Using N2W on AWS, BFAS has reduced the time it takes to synchronize internal workloads from its production environment to its development environment from days to an hour. The time gained by the IT department enables the team to focus on developing value-added initiatives to save animal lives. Thanks to its ability to move quickly on AWS and executive support toward technological innovation, BFAS is now focused on new ways to take advantage of AWS technology.

The company

Best Friends Animal Society (BFAS) is a national animal welfare organization dedicated to ending the killing of dogs and cats in shelters. In addition to running lifesaving programs in partnership with more than 2,500 animal welfare groups across the country, Best Friends has regional centers in New York City, Los Angeles, Atlanta, and Salt Lake City, and operates the nation's largest no-kill sanctuary for companion animals. Best Friends has helped reduce the number of animals killed in shelters nationwide from 17 million per year to about two million. Determined to get that number to zero by the year 2025, Best Friends and its nationwide network of members and partners are working to Save Them All.

Using data to saves animals' lives

The mission of Best Friends Animal Society is to bring about a time when there are no more homeless pets. For over 30 years, BFAS has sought to transform the adoption experience by focusing its efforts on building a comprehensive network, creating community-based, lifesaving coalitions in different parts of the country, and transforming how people identify, connect with, and adopt pets. A crucial element of BFAS' success and ability to drive innovative new programs is its top-down focus on data.

"Our focus on data—from the executive level on—is changing the way we do things," says Brent Bain, lead systems engineer and cloud architect at Best Friends Animal Society. "Before, we knew around 40% of the shelter statistics across the country regarding save rates. By focusing on our data and the technology behind our data, we're now at 86 percent known data for shelter save rates. This has drastically changed how we approach supporting initiatives and priorities."

> "Synchronization was a tedious on-premises task. With AWS, we're able to spin up resources immediately, and using N2W, we can easily restore a server, keeping all of the same metadata while using the same security groups. N2W and AWS satisfy all of our requirements and make my job much easier."
>
> Brent Bain, Lead Systems Engineer and Cloud Architect, BFAS

BFAS began hosting its website on the Amazon Web Services (AWS) Cloud nearly a decade ago. However, until a couple of years ago, the organization still ran most of its mission-critical applications and databases on-premises. "We were planning an upgrade to our on-premises footprint, but we had also developed a long-term cloud roadmap," says Bain. "Given the performance issues we faced on-premises and our plans to scale, we decided to move up our timeline for migrating mission-critical applications to the cloud. We evaluated Microsoft Azure and AWS and chose to move forward with AWS." The team then began a three-month migration process to AWS.

Seeking a scalable, reliable, and easy-to-use backup solution

The initial application that BFAS decided to migrate to AWS proved critical to the day-to-day work of over a hundred individuals within the organization and crucial for advertising and donation collections. Because of its business-critical nature and its quickly growing footprint, the BFAS team needed to find a suitable backup solution for the application and its data. The team turned to AWS Marketplace to evaluate backup solutions and quickly discovered N2W.

N2W, an APN Advanced Technology Partner, is a software company focused on providing backup and incident recovery solutions for AWS. The company's product uses AWS-native snapshot technology to provide a holistic, end-to-end backup and disaster recovery data protection solution. "I began with the 30-day demo of the N2W Backup & Recovery solution, and right away, it just worked," says Bain.

> "I was able to set up a comprehensive backup schedule within about a half an hour of getting started and it has been reliable ever since."

Today, N2W provides BFAS with a 1-click, cross-account and cross-region disaster recovery solution, securely copying backups between multiple AWS Regions and Availability Zones (AZs). N2W also provides customers like BFAS with tools and support to better manage data on AWS and save money. "We're exploring new ways to help customers archive snapshots and choose different storage for their data," says Katherine Marshall, senior product marketing manager at N2W. "We're moving into a space where our solution not only helps users with the fundamentals of backup and disaster recovery, but also helps them manage their data and optimize their costs on AWS."

While BFAS initially began using N2W through AWS Marketplace, the team quickly began to scale its usage and work closely with N2W to discuss its needs. "N2W has been very supportive of us as a non-profit and the unique approach we must sometimes take," says Bain. "Over the past year and a half, our relationship with N2W has evolved into a real partnership. I feel empowered to reach out to them to discuss new features and pick their brains."

Reducing data protection concerns

Using N2W on AWS, BFAS has reduced the time it takes to synchronize internal workloads from its production environment to its development environment from days to an hour. The time gained by the IT department enables the team to focus on development work focused on value-added initiatives to save animal lives.

"Synchronization was a tedious on-premises task. With AWS, we're able to spin up resources immediately. Using N2W, we can easily restore a server, keeping all of the same metadata while using the same security groups," says Bain.

> "We take a snapshot that N2W provides and restore it as a development environment in about one hour. That's been hugely successful for us and saves us a lot of time."

Being able to generate detailed reports through the N2W reporting tool has also been critical for BFAS as a non-profit. "Using N2W on AWS, I can quickly do a workload restore, generate a report, and quickly hand it off to financial auditors," says Bain. "N2W and AWS satisfy all of our requirements and make my job much easier."

Over the last six months, BFAS grew its AWS footprint from three AWS accounts to 15 and runs 75-100 Amazon Elastic Compute Cloud (Amazon EC2) instances on any given day. BFAS is using N2W to protect internal Amazon EC2 workloads and Amazon Relational Database Service (Amazon RDS) instances that support both its website as well as internal workloads.

The organization has recently implemented the N2W's Resource Control feature to help manage powering on and off development environments. This leads to a direct decrease in its monthly Amazon EC2 costs. BFAS sees no end to N2W's status as its strategic partner. "N2W will always play a role for us as we continue to scale our usage of AWS, particularly as they keep rolling out new features that go beyond backup and recovery," says Bain. "The way they continue to innovate is super exciting to us."

Thanks to its ability to move quickly on AWS and executive support toward technological innovation, BFAS is now focused on new ways to take advantage of AWS technology. The organization is currently exploring serverless technologies and finds the excitement of building on AWS leads to more collaboration across departments and teams. "The cloud has transformed the way we're thinking—not just about data, but how we are broadly approaching business problems using technology," says Bain.

Having just launched a Data Lake on AWS using Amazon Simple Storage Service (Amazon S3), Amazon Athena, and AWS Glue, the BFAS team is already taking advantage of newly discovered data from its shelter management software to gather real-time data and generate real-time reports from over 2,200 shelters across the country.

The organization's next steps are focused on using machine learning and applying predictive analytics for many use cases, such as optimizing shelter transport planning before a natural disaster strikes or identifying clear patterns of adoptable animal availability in particular regions to advance transportation planning efforts.

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