

AUTOMATED DISASTER RECOVERY IN AWS

THE CHALLENGE

Deliver a low cost disaster recovery solution using the public cloud.

Leverage the existing data protection system, Cohesity, to avoid additional investment and training.

Minimize complexity and make the recovery process consistent, repeatable, and predictable.

HOW THE CITY OF BURBANK PARTNERED WITH P1 TECHNOLOGIES TO BUILD A RELIABLE AND COST EFFECTIVE DR SOLUTION.

The Unattainable Triangle

When the City of Burbank decided it was time to modernize their approach to disaster recovery, they knew they would have a variety of options. They could choose from any number of data protection technologies and landing zones but to narrow the field, they first had to define their decision criteria. Like any technology project, this one would be bound by the “unattainable triangle” of speed, quality, and cost. You get to pick two but you can’t have all three.

The data protection team at the City of Burbank established a very clear initiative. The recovery scenarios they were planning for required consistent and predictable recovery and although recovery time was important, cost was paramount. They chose quality and cost. They also chose the data protection experts at P1 Technologies to help them design and build the solution.

Less is More

With so many options available, a technology down select process was in order. P1 analyzed the primary environment and teamed up with the City of Burbank (CoB) infrastructure and application teams to establish and prioritize requirements. We quickly landed on two key design principles:

- **Running, and more importantly, paying for resources to sit idle had to be avoided. In order to meet CoB’s top criterion, cost, we would need a “pilot light” solution.**
- **Leveraging CoB’s existing data protection platform, Cohesity, would eliminate the need for additional investment and training.**

Public cloud was the perfect fit for a “pilot light” solution. It would allow CoB to provision compute only as needed during a DR test or an actual event. Since P1 had already conducted dozens of Cohesity recoveries in AWS and CoB was already an AWS customer, it was an obvious choice.

Now that Cohesity and AWS were selected, we needed to determine the method of recovery. Although the field had been narrowed, because both offer dozens of recovery options, it had to be narrowed even further. To do so, we went back to the triangle and evaluated each option through the lens of cost and quality.

VMware Cloud on AWS (VMC) was an option, and although native AWS services would require a platform conversion, the cost was significantly lower. To achieve quality, or in the case of data protection, reliability, the entire process had to be automated from start to finish.

RESULTS AND BENEFITS

THE SOLUTION

Leverage AWS EC2 and Cohesity to recover from data stored on low cost S3 storage.

Automate infrastructure provisioning and deprovisioning to minimize the cost to recover and validate.

Ensure recovery reliability and predictability through automation.



Simplicity - Infrastructure as Code (IaC) and automated recovery made a complex process easy to execute.



Reliability - AWS and Cohesity provided dependable platforms for a DR solution.



Cost - Minimized cost by using only what was needed and paying for only what was used.

From Complex to Simple with Automation

CoB wanted to start with their most critical application, Oracle's E-Business Suite (EBS). Once we established an approach, wrote the code, and documented the process, it could be used as a template for the rest of their application portfolio.

The P1 Engineering team had to account for all the underlying infrastructure that the application required and assume nothing would be available during an actual DR event. We deployed software based VPN appliances, connected to Azure AD for authentication, and recreated CoB's data center networking environment using infrastructure as code (IaC) with HashiCorp's Terraform. We were able to spin a landing zone up and down for each recovery iteration which allowed us to cover all onboarding costs using POC credits provided by AWS.

Cohesity's CloudArchive feature was used to send backups to S3. For recovery, we spun up a Cohesity node on EC2 (Terraform again), used Cohesity's CloudRetrieve to identify and restore the backup set, and CloudSpin to conduct a platform conversion from VMware vSphere to EC2. After some Linux and Oracle database recovery automation was in place, we were online and ready to go.

Although the steps were fairly straightforward, getting there took several iterations. With each iteration, the process improved and eventually completed like clockwork. Recovery time was reasonable (under 4 hours) but most importantly, the recovery outcome was predictable.

In the end, our models for recovery events and ongoing operational costs lined up with the actuals and the entire initiative was delivered with a simple runbook and a code repository. All made possible through automation.



About the City of Burbank

From the earliest days as the Rancho Providencia and then the Providencia Land, Water and Development Company, Burbank has evolved to be a place of civic pride, achievement and innovation. Burbank's 1911 incorporation as a city set them on a path from agriculture to industry, from aircraft manufacturing to film production, while maintaining the neighborhoods and small-town feel that draw people there today.



P1 Technologies is an innovative consulting team of enterprise architects with deep cloud expertise. We're focused on simplifying and automating workloads, so that our customers can focus on their business goals.



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