

Security and Reliability for Cloud-Based Startup ZenVault® Medical



“There could be no ZenVault Medical without ZeroDown Software. The cloud gives us flexibility, expandability, and low cost, and ZeroDown adds application uptime and data security. As a business, ZenVault Medical can’t survive without that reliability.” Josephine Zhao - Lead Developer and Co-Founder, ZenVault, Inc.

Delivering on the Promise of the Cloud

The cloud promises lower costs, high availability, and better security. Yet deployment risks, migration risks, and doubts about cloud reliability are hindering its adoption. Business managers are concerned about the safety of their mission-critical processes, applications, and data.

ZeroDown Software, Inc. virtually eliminates the risks of migrating to the cloud. It uses patented Always Available™ technology to protect applications and data hosted on multiple cloud instances from downtime.

ZeroDown Software enables one or more cloud instances to establish reliability quickly, each simultaneously processing the same transactions and hosting the same applications in multiple zones. ZeroDown Software can bring application availability in the cloud up to virtually 100%.

Reference Implementation: ZenVault® Medical

ZenVault Medical is a Personal Health Records (PHR) portal that allows consumers to manage their complete personal healthcare record online. Its success depends upon availability and security.

ZenVault Medical was conceived as a next-generation portal, capable of scaling, managing, and adding customers at a price point lower than the competition. Use of the cloud is vital to the business model, since no other hosting paradigm offers the flexibility and low cost required. But development of the portal was postponed due to doubts about cloud reliability, availability, and safety. The ZeroDown Software helped eliminate these doubts.

ZeroDown Software - Business Continuity as a Service™ [BCAAS]

ZeroDown Software made ZenVault possible because it redefines how a high-demand business can be launched and operated safely and efficiently in the cloud. For the first time, all the required factors came together in one cloud-enabling offering: safe and easy migration, dependable uptime, high performance, strong security, plus low cost and flexibility.

Since launch, the Amazon Cloud on which ZenVault Medical is hosted has experienced several notable downtime events, but ZenVault has not experienced any outages as a result.

Benefits of ZeroDown Software:

- Reduced risk when deploying business-critical applications to the cloud
- Safe and easy migration to the cloud
- Significantly greater cloud reliability

ZeroDown Software offers Easy, Methodical, and Safe Cloud Migration

ZenVault® used a development sandbox hosted on an Amazon EC2 cloud. Upon completion, the Primary instance was launched internally within an Always Available™ array on virtual servers at a local non-cloud colocation hosting facility.

ZenVault was rolled out to the public in September 2010. Following the business plan, the Primary was copied and migrated to the Amazon EC2 cloud. Cloud migration took place in pre-planned, methodical stages, utilizing the ZeroDown Software product to build first one cloud node and then another. The Primary continued in operation at the colocation facility.

The first cloud node was created on Amazon EC2 East, tested, and brought online once it was proven to be stable. The process was then repeated on Amazon EC2 West. ZeroDown Software provides parallel processing between the two cloud instances and the Primary. If one instance goes offline, the other two simply continue processing with no interruption to the user experience.

Performance Benefits and Effects

The overall benefit of ZeroDown Software and its Always Available™ technology is the virtual elimination of application downtime. If one node, server, or application instance goes offline, the others continue to process.

During Cloud Migration

There was no one-time, do-or-die switch to the cloud, where problems with application startup or integration could have knocked the portal offline. The Primary continued to function as always during the entire process.

During Maintenance and Upgrades

ZenVault Medical has gone through many maintenance, repair, and upgrade cycles without ever having to take the service offline. Always Available™ enables any application or machine to simply be taken out of the array for maintenance or upgrade, and be reinstated once it is ready.

During a Disaster

The same paradigm enables ZenVault Medical to maintain full uptime, even during disasters such as hardware failure, software failure, earthquakes, fires, storms, and cloud outages.

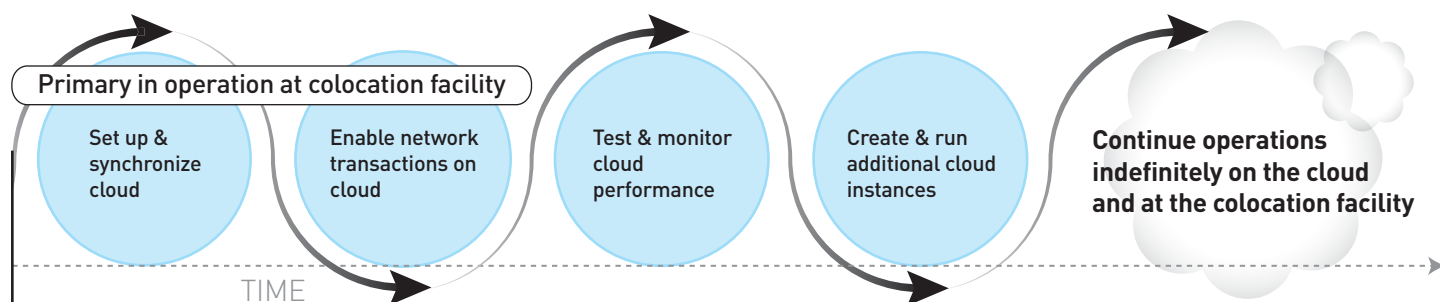
Economic Benefits

Maintaining continuity within ZenVault's core portal application and databases maintains the existing cost structure and revenue stream.

- **Prevents** interruptions to customer sessions, registration, and inquiries.
- **Enables** on-time payment processing.
- **Costs less** than other less effective solutions.
- **Protects** the reputation of the company, helping to build future business.
- **Reduces** recurring costs for backups, emergency recovery, unnecessary failover systems, and more.
- **Maintains** and increases shareholder value.

How Your Cloud-Based Business can be Always Available

ZeroDown Software removes the uncertainty from hosting critical applications in the cloud. It breaks away from traditional cloud migration and disaster recovery by empowering cloud users with a new business continuity standard: virtually 100% uptime, anytime, all the time.



Contact ZeroDown Software today for more information about how it provides an entirely new level of reliability, security, and ROI to cloud-based businesses.



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ZeroNines® Technology, Inc. provides a new standard in network disaster recovery, shifting the paradigm from reactive recovery to proactive business continuity. Our Always Available™ information security and availability technology pushes application uptime beyond five nines (99.999%) to virtually 100% anytime, all the time – zero nines. This enables uninterrupted access to business data, applications, and transactions despite disasters or network disruptions that would otherwise cripple the enterprise. Always Available™ processes all transactions in parallel on geographically dispersed servers that are all hot and all active, eliminating single points of failure. It operates agnostically across multiple platforms, leveraging existing processing and storage infrastructure. We also

offer enterprise infrastructure assessment, program management and project implementations. Founded in 2000 and based in Denver, Colorado, ZeroNines' primary target customer base includes Global 2000 companies. 110416

Contact ZeroNines Technology, Inc. today to find out how your business can be Always Available!

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