



CLOUDNINES™

Always Available™ Reliability for the Cloud



Fulfilling on the Promise of the Cloud

Businesses of all sizes are turning to cloud computing as a means of increasing flexibility and cutting costs. They are attracted by the cloud's promise of affordable scalability and its potential for leveraging the power of the Internet from every desktop. However, serious concerns prevent widespread adoption of cloud technology:

- Quality of service
- Availability
- Disaster recovery
- Security

Even a short cloud outage could lead to cascading application failure, lost data, and lost productivity. Disaster recovery will get you up and running again, but the damage has been done. You need to ensure business continuity by preventing the damage in the first place.

The ZeroNines® Solution

CloudNines™: Virtually 100% Uptime for the Cloud

CloudNines™ removes the uncertainty from cloud computing by applying patented Always Available™ technology to the cloud interface for an entirely new level of reliability and security. CloudNines protects against catastrophic downtime, providing continuous access to data and applications in the cloud, even in the event of network or

We keep your vital business applications up and operating at full efficiency and with no interruptions, even if a disaster cripples part of your cloud network. All clouds and their servers are hot, and all are active. All transactions process in parallel on every cloud.

Internet threats that would normally shut down access and cripple your cloud-dependent business. CloudNines breaks away from traditional disaster recovery by empowering cloud users with a new business continuity standard: virtually 100% uptime, anytime, all the time.

Our patented software integrates with cloud applications from leading providers, and works with your existing applications, servers, and network infrastructure. It creates a unique networking paradigm, where the loss of access to any part of your cloud network will not hinder performance for your end users. Your transactions continue, your people have access to the same applications, and your information flows as normal.

Benefits of the ZeroNines Solution

- Provides unprecedented cloud availability of virtually 100%.
- Proactively prevents disasters like fires, floods, and software/equipment failures from bringing your business to a halt.
- Protects against financial losses by preventing loss of data, transactions, and productivity.
- Increases the power of your cloud by synchronizing multiple private, public or hybrid clouds at multiple vendors. No other cloud solution can do this.
- Avoids costs for disaster recovery systems that leave you vulnerable.
- Helps meet many of the requirements for compliance with strict federal standards, including Sarbanes-Oxley and HIPAA.
- Leverages current investments in hardware, applications, and service providers.

CloudNines Moves Beyond Disaster Recovery

You can lose access to the information and applications on the cloud for a number of reasons: failures of service provider technology, storms, construction accidents, and many others. Standard disaster recovery methods only come into play after the damage has been done, when it is too late to protect your business' revenue and reputation. All standard disaster recovery techniques – failover, remote vaulting, tape backups – are expensive, unreliable, and can't prevent outages in the first place.

It may take hours or days for these techniques to restore applications and get your business going again, even if your network was down for just a few minutes. Some information and transactions will be lost or damaged. Your applications may suffer cascading failures, requiring lengthy and extensive recovery work. If your business operates under Sarbanes-Oxley, HIPAA, or other regulations, there is the real risk that you may be thrown out of compliance.

ZeroNines can't stop a hurricane, but it does prevent one from becoming a disaster for your cloud-enabled business. Our technology was built under the assumption that part of your network will fail sometime, and that your systems must work in spite of this. We keep your cloud network up and operating at full efficiency and with no interruptions, regardless of what happens to any part of it. It's not disaster recovery. **It's disaster prevention.**

How CloudNines™ Technology Works

At the core of CloudNines™ is the ZeroNines® patented Always Available™ technology. Always Available enables all your transactions, data exchanges, and other network activities to occur equally and simultaneously on multiple cloud networks. In IT parlance, all clouds and cloud servers are hot, and all are active. There is no hierarchy, and consequently no single point of failure.

If a cloud, cloud provider, or their locale suffers from a disaster, all activities continue uninterrupted via the virtual applications on other clouds. There is no need for failover or recovery because continuity is maintained.

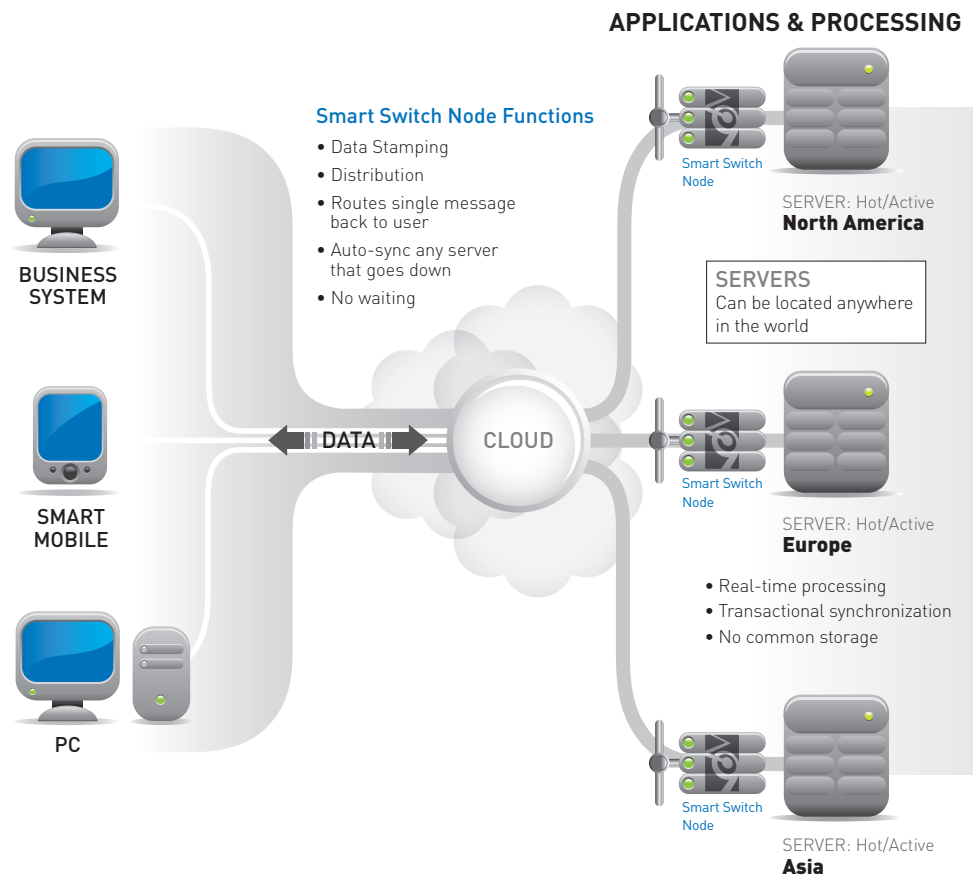
Here's What Happens:

1. Server calls are originated by networked clients: computers, email, PDAs, phones, business software, databases, etc.
2. Each transaction passes through the ZeroNines Smart Switch Nodes, which route it simultaneously to all clouds in a one-to-many [1:m] session.
3. Processing and storage take place equally in all clouds. All clouds and their servers are hot, and all are active. There are no primary or secondary clouds.
4. All transactions and data exchanges are recorded, verified, and subjected to security measures.
5. Each cloud and its virtual applications send their responses back through the Smart Switch Nodes.
6. The Smart Switch Nodes cooperatively eliminate duplicate responses and return a single response to the client that originated it.

Safeguards are in place for guaranteed message delivery, data authorization, journaling, and synchronization to make sure that every transaction is secured, translated, completed, recorded, and communicated to the other networked clouds. If one part of your cloud goes offline, the Journaling feature and Smart Switch Nodes automatically update it once it comes back on line, enabling it to function at full capacity and to take over for the others if necessary. This capability is unavailable through any other source.

CloudNines' architecture is agnostic regarding applications, operating systems, platforms, and cloud vendors, accommodating your existing equipment and way of doing business. You can mix and match old and new hardware without compromising cloud integrity.

The ZeroNines Always Available architecture natively supports HTTP, POP3, and SMTP protocols. A protocol interface development kit enables easy creation of interfaces for applications that use other protocols.



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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.

Contact ZeroNines today to find out how your business can be Always Available!

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