## Disaster Recovery Services In AWS Cloud

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## **Document Version Information**

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1.1	Added Document Version section	6/25/2020	Gaponenko Boris	CTO, Barry Jones
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	Table of Contents
2.	Summary
3.	FREQUENTLY ASKED QUESTIONS

3

## 2. Summary

With the migration to AWS, Jive cloud and hosted customers get robust disaster recovery as a standard feature. One of the many advantages of Jive's next-generation platform on AWS (Amazon Web Services) Cloud is its high availability infrastructure. Spanning multiple data centers, this infrastructure provides everything needed for robust disaster recovery. Previously, Jive has provided Enhanced Disaster Recovery (EDR) as a premium add-on service to cloud and hosted customers. With the migration to AWS, all Jive cloud and hosted customers will get world-class disaster recovery capabilities as a standard feature, free of charge. For that reason Jive will no longer offer its EDR service once the migration is complete. AWS's cloud infrastructure is designed to meet the highest standards of high availability and resiliency. Many of the world's largest companies and institutions rely on AWS Cloud to power mission-critical applications.

The AWS Cloud infrastructure is built around Regions and Availability Zones (AZ's). AWS Regions provide multiple, physically separated and isolated Availability Zones which are connected with low latency, high throughput, and highly redundant networking. A disaster event (e.g., fire, flood, earthquake, tornado, hurricane) in one AZ will not impact any other AZ. Latency between AZ's is generally less than 1-2ms, allowing for all AZ's in an AWS region to be treated as one big data center. All Jive services are deployed to at least two (usually three) AZ's within a region.

All data is replicated between at least two AZ's. Databases can be failed over in 1-3 minutes. The table below compares disaster recovery in Jive AWS vs Jive Cloud/Hosted (with and without EDR). As you can see, Jive AWS provides equivalent or faster recovery.

Event	Jive AWS	Jive Cloud/Hosted witout EDR	Jive Cloud/Hosted with EDR
The host with the database fails	The application will be unavailable. The database will automatically restart in the other AZ and work will resume. No data will be lost. This takes 1-3 minutes.	The application will be unavailable. The database will be restarted in the other rack and work will resume. No data will be lost. This takes several minutes.	The application will be unavailable. The database will be restarted in the other rack and work will resume. No data will be lost. This takes several minutes.
The host with the webapp node fails	Reduced performance until the new webapp node automatically starts (minutes).	Reduced performance until the new webapp node can be automatically restarted (several minutes).	Reduced performance until the new webapp node can be automatically restarted (several minutes).
A data center (or AZ) fails	Reduced performance until services in the remaining AZ's start (minutes).	The customer instance is unavailable until the data center is restored (days, weeks, or longer).	The customer instance is unavailable until it is restarted in the backup data center (several hours). Up to several hours of data may be lost.
The host with a shared service fails	No impact	No impact	No impact

## FREQUENTLY ASKED QUESTIONS

Q: Can I do a disaster recovery test in AWS?

A: No. With the new architecture, all services run on multiple nodes. These nodes are regularly taken down for

maintenance and deploys, so, in effect, disaster recovery testing is a continuous process.

Database nodes also

undergo maintenance and are regularly failed over to their backup nodes. This is seamless and automatic.

Q: Are there events that could cause an entire AWS region to fail?

A: Yes, but it would take an extremely unlikely catastrophic event such as a major meteor strike or nuclear attack.

Also, if an entire AWS region were to fail, the impact on the Internet would be extreme. It is very likely that other customer systems would be highly impacted.

Q: What about outages due to human error?

A: They can and have happened. But in such cases it typically takes only a few hours to fully restore services with no data loss.

**For more information** regarding availability in the Jive or AWS Cloud, please see the Jive Security Whitepaper (customer security packages).

For more information on AWS high-availability infrastructure, see Regions and <u>Availability Zones - Amazon Elastic Compute Cloud</u>