

Identity Digital's Cloud-Based Registry Data Centers

Our Registry System Infrastructure is architected on Amazon Web Services (AWS), leveraging a cloud-native design that emphasizes security, scalability, and high availability. We adopt a multi-account AWS strategy to streamline operations and enhance security through workload isolation, centralized governance, and standardized cloud security policies across environments.

We utilize the AWS Global Infrastructure, which is composed of multiple Regions and Availability Zones (AZs). AWS Regions are geographically isolated and contain at least three physically separated AZs. Each AZ operates as a distinct data center with independent power, cooling, physical security, and network connectivity. AZs within a Region are interconnected through AWS's high-bandwidth, low-latency private network, enabling synchronous data replication and reliable failover capabilities. Our Registry services are deployed across multiple AZs within a Region to eliminate single points of failure and to ensure high availability, durability, and fault tolerance.

Amazon Web Services maintains and operates its data centers to meet Tier III or higher specifications, offering redundancy at every level and ensuring continuity of service. As stated on their website,

"The AWS Global Cloud Infrastructure is the most secure, extensive, and reliable cloud platform. AWS data centers are generally designed to meet the requirements of concurrent maintainability, which is at the core of the Uptime Institute Tier standards. However, AWS has chosen not to have a certified Uptime Institute-based tiering level so that we have more flexibility to expand and improve performance. AWS' approach to infrastructure ensures the highest level of performance and availability for our customers. Specifically, AWS infrastructure within our Availability Zones exceeds concurrent maintainability standards by also focusing on metrics not tracked by those standards." This quote can be found on Amazon's website at <https://aws.amazon.com/compliance/uptimeinstitute/>.

AWS also continuously upgrades its infrastructure through seamless maintenance processes that abstract hardware and firmware changes from customer workloads and enable us to focus on innovation while AWS ensures physical infrastructure integrity.

To enhance resilience and support disaster recovery, our architecture is designed to withstand infrastructure failures through multi-region strategies. Services can be rapidly redeployed across AWS Regions using infrastructure-as-code (IaC) practices combined with resilient services such as AWS Global Database. This approach enables automated provisioning, consistency across environments, and low Recovery Time Objectives (RTO) and Recovery Point Objectives (RPO), ensuring continuity of registry operations even in the event of regional disruptions.

Our systems are built to scale in response to real-time demand using AWS services like Auto Scaling, Elastic Load Balancing, and Elastic Block Storage. This elasticity allows us to maintain consistent performance and availability without overprovisioning, efficiently supporting peak periods of activity and rapid growth scenarios.

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Operational excellence is achieved through automation and IaC practices. We utilize AWS Systems Manager, AWS GuardDuty and AWS Config to define, provision and audit infrastructure in a repeatable and secure manner. This automation enables consistent deployment practices, continuous compliance enforcement, and the rapid remediation of operational issues, which aligns with our commitment to performance, governance, and agility.