

Frequently Asked Questions

ArcGIS Enterprise Deployment on AWS

How does the AWS account structure ensure security and reliability?

Our deployment follows AWS Well-Architected Framework best practices, specifically the Security and Reliability pillars.

We implement:

- AWS Organizations and Control Tower to enforce governance and access control.
- IAM policies and roles with least-privilege principles.
- AWS Config and Security Hub for continuous compliance monitoring.
- Multi-AZ deployments for resilience and uptime.

How are the ArcGIS Server and databases deployed to AWS Cloud?

- We use Infrastructure-as-Code (IaC) with AWS CloudFormation and Terraform to automate deployment.
- ArcGIS Server is deployed on Amazon EC2 instances with autoscaling enabled for reliability.
- ArcGIS databases are hosted on Amazon RDS Aurora with multi-AZ failover.
- Shared storage for GIS data is provisioned using Amazon EFS and S3.

How is on-premise data synchronized to the cloud?

- AWS DataSync is used to synchronize file-based GIS data to Amazon S3 and EFS.
- AWS Database Migration Service (DMS) supports relational data replication to Amazon RDS.
- Data can be synchronized in near real-time using Change Data Capture (CDC) to keep cloud and on-premise databases aligned.

How is secure access to resources deployed to the Cloud ensured?

- IAM Identity Center allows granular access to AWS accounts and resources like EC2 instances deployed to.
- A VPN endpoint provides secure access to database cluster and instances.
- Secure authentication and encryption protocols are applied to all data transfers.

What role does AWS DMS play in testing systems side by side?

- AWS DMS enables continuous replication of on-premise databases to AWS RDS.
- Change Data Capture (CDC) allows testing of both environments in parallel before full migration.
- This ensures minimal downtime and a smooth transition from on-prem to cloud.

Does VividCloud provide data grooming services?

- No, data grooming and preparation remain the customer's responsibility.
- However, we collaborate with ESRI/ArcGIS partners who can assist with data refinement and transformation.

How does storage scalability work?

- Amazon S3, RDS, and EFS expand dynamically as needed, eliminating manual storage management.
- Customers do not need to allocate fixed storage capacity upfront.

Can ArcGIS Server instances scale to support more clients?

- Yes, ArcGIS Server runs on Auto Scaling EC2 instances to handle increased traffic.
- Load balancing via AWS Elastic Load Balancer (ELB) ensures even distribution of requests.

How is database read capacity managed as the user base grows?

- Amazon RDS supports Read Replicas to offload read traffic and improve performance.
- The database instance size can be upgraded without downtime using AWS RDS scaling options.

Will Infrastructure-as-Code (IaC) be provided for future updates?

- Yes, we provide CloudFormation/Terraform templates to enable automated updates.
- Customers can modify configurations and redeploy changes seamlessly.

Does VividCloud offer maintenance and support services?

- Yes, maintenance services can be arranged upon request.
- We provide ongoing support, monitoring, and enhancements tailored to customer needs.

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