

# ArcGIS Enterprise AWS Migration



Migrating ArcGIS Enterprise to AWS empowers organizations with a scalable, secure, and cost-efficient cloud infrastructure for hosting GIS services. This solution enhances geospatial data management, analysis, and sharing while optimizing performance and operational efficiency. By leveraging AWS's elastic compute, storage, and networking capabilities, organizations can seamlessly scale their GIS workloads to meet evolving demands.

Built on AWS best practices, this deployment ensures high availability, resilience, and automation, reducing downtime and administrative overhead. Native AWS services, such as Amazon RDS, AWS Auto Scaling and AWS Elastic File System (EFS) further enhance reliability and efficiency. With robust security and compliance frameworks, organizations can confidently modernize their GIS infrastructure while improving collaboration and decision-making.

## **Migration Process:**

Migrating ArcGIS Enterprise to AWS follows a structured approach to ensure a seamless transition while enhancing scalability, security, and performance. The process begins with an Assessment & Planning phase, which includes an evaluation of the organizations existing ArcGIS infrastructure, database dependencies, and storage needs. A target architecture is then designed using AWS services such as EC2 for ArcGIS Advanced Server, Amazon RDS for PostgreSQL, and AWS EFS for shared storage. AWS Landing Zone is configured to establish governance, security, and network connectivity.

A validation phase follows, testing database migration feasibility with

AWS DMS and validating ArcGIS functionality on AWS infrastructure. Once confirmed, the Migration Execution phase deploys ArcGIS Advanced Server on AWS EC2, migrates SQL Server data to RDS PostgreSQL, and synchronizes GIS applications using AWS DMS or manual imports. This approach ensures minimal downtime, optimized performance, and long-term cost efficiency, enabling organizations to modernize their GIS infrastructure with AWS-native solutions.

### Key Features:



**Scalability & Performance:** Dynamically scale compute and storage resources to handle varying GIS workloads efficiently.



**Optimized GIS Performance:** Improve map rendering, geospatial queries, and spatial analysis using AWS high-performance compute.



**High Availability & Resilience:** Leverage AWS multi-region, multi-AZ architectures for improved uptime and disaster recovery.



**Advanced Analytics & AI/ML:** Extend GIS capabilities with AWS analytics, AI/ML, and data lake solutions.



**Automation:** Reduce manual intervention with Infrastructure-as-Code and automated monitoring.



**Security & Compliance:** Utilize AWS security frameworks to protect sensitive geospatial data.



**Cost Efficiency:** Optimize costs with right-sized EC2 instances and pay-as-you-go services.



**Reduced IT Overhead & Maintenance:** Minimize infrastructure management efforts, allowing IT teams to focus on innovation.



**Competitive Advantage:** Leverage cloud-based GIS capabilities to enhance business operations, drive growth, and improve customer experience.

### Target Audience

The solution is ideal for organizations looking to modernize their GIS infrastructure, enhance geospatial data accessibility, and improve operational efficiency with a scalable cloud platform.

Typical use cases include:



#### Location Intelligence

Real-time geospatial insights to optimize market expansion and resource allocation



#### Supply Chain

Enhance route planning, asset tracking, and logistics efficiency



#### Risk Management

Supports compliance, environmental monitoring, and disaster response



#### Customer Experience

Enables businesses to analyze consumer behavior and optimize site selection

Contact Us

For further details about the technical architecture, high configurability, security and speed, please refer to the FAQ and other documents for this offering.

Y | V | P  
CLOUD