

Amazon Bedrock Migration Service Offering



Challenges

Addressing Fragmented Architectures, Security Risks, and Scalability Challenges in GenAI Workloads

Customers often struggle with fragmented GenAI architectures, vendor lock-in, and limited scalability. Many face challenges integrating disparate AI services (e.g., OpenAI, IBM Watson, Pinecone, etc.), managing unpredictable costs, and meeting security and compliance requirements. For example, inadequate prompt optimisation, underutilised vector stores, and limited reliability can further hinder performance and outcomes. Migrating GenAI workloads to Amazon Bedrock helps address these pain points by offering significantly greater flexibility in GenAI solution development and enabling organisations to fully harness Bedrock’s secure, scalable, and cost-effective ecosystem. Data Reply provides a structured approach to de-risk and optimise the migration process by offering relevant expertise and leveraging best practice frameworks and tooling.



The Data Reply Solution

Secure and scalable migration to Amazon Bedrock with optimised GenAI workflows and enhanced output quality

Data Reply’s Amazon Bedrock Migration Service Offering provides end-to-end support to transition existing customer GenAI workloads into the AWS Bedrock ecosystem, addressing key pain points in the process. Data Reply works flexibly with the client team providing guidance, best practice, training, enablement and deployment support. Data Reply service includes migration assessments, architectural redesign, Bedrock deployment and optimisation. By consolidating fragmented AI stacks, re-engineering prompts, enhancing data security throughout etc, we enable more efficient and secure GenAI operations. Leveraging AWS-native GenAI tools and services within Amazon Bedrock such as Bedrock Flows and Guardrails and etc, our solution simplifies prompt management, secures GenAI pipelines, and provides full visibility and control—empowering organisations to optimise GenAI performance within a secure, scalable cloud environment.

Benefits

Accelerate, de-risk and scale GenAI adoption by simplifying migration, enhancing security, performance, and reducing operational complexity on AWS.



Choice, Flexibility & Operational Efficiency

Access to multiple foundation models through a single API and reduces overhead by unifying AI services under AWS’s flexible, consumption-based pricing model. Tools for modes’ customisation



Improved Scalability & Performance

Optimised infrastructure, prompt orchestration, built-in model evaluation and testing capabilities enable efficient scaling and consistent GenAI output quality.



Enhanced Security & Compliance

Built-in guardrails and native integrations protect sensitive data and support regulatory compliance across industries and geographies



Reduced risk and cost of migration, accelerated time to value

Guided assessments, architecture blueprints and simplified deployment with serverless architecture ensures a smooth, low-risk transition into AWS Bedrock’s managed environment.

Reply and AWS

AWS and Data Reply, a part of Reply Group, a premier and strategic AWS partner with AWS GenAI and Migration and Modernization Competencies create a powerful synergy in the GenAI space, combining AWS's robust cloud infrastructure and comprehensive AI/ML services with Reply's deep technical expertise and industry knowledge. This collaboration enables organizations to rapidly deploy and scale sophisticated GenAI solutions while navigating complex integration challenges, ensuring regulatory compliance, and delivering tangible business outcomes. Together, they provide end-to-end support from strategic planning through implementation and ongoing optimization, allowing enterprises to harness the transformative potential of Generative AI while minimizing risks and accelerating time-to-value.

Features



Data Reply Amazon Bedrock Migration Service Offering” aligns with the AWS Migration Acceleration Program (MAP) - a comprehensive and proven cloud migration program based upon AWS's experience migrating thousands of enterprise customers to the cloud. The offering supports end to end migration steps:

Assess

This phase focuses on evaluating the current GenAI landscape to confirm key migration drivers, identify technical dependencies and potential risks, conduct cost /benefits analysis to support a business case

Mobilise

This phase focuses on defining target architectures, and a tailored migration plan aligned with business goals. It ensures a clear understanding of the readiness, scope, and success criteria, laying the foundation for a smooth and efficient transition to AWS Bedrock. Key activities include redeveloping solution designs leveraging AWS GenAI services (e.g., Bedrock Flows, Bedrock Guardrails), and finalising process, technology, and skills gap assessments, alongside a structured training plan.

Migrate & Modernize

This phase focuses on transitioning , optimising and enhancing end-to-end GenAI workflows within the AWS Bedrock ecosystem. This includes re-architecting solutions such as RAG pipelines, agent-based workflows, and orchestration layers, alongside prompt refinement and model optimisation. We integrate relevant AWS services, apply best practices, and implement Bedrock-native tools like Guardrails and Bedrock Flows to ensure scalable, secure, and high-performing GenAI operations tailored to business needs.



Case Study

Wscripted.

The Client : Wscripted is an impact-driven story discovery company on the mission to diversify story discovery and financing for Film, TV and Publishing



Challenges

Wscripted needed to address security concerns around sending sensitive, copyright-protected content outside their network for AI processing. They also faced issues with inconsistent summary outputs and variable processing times across different content lengths.



Solution

We supported the migration from OpenAI to Amazon Bedrock, leveraging the client’s AWS infrastructure. We re-engineered over 25 prompts, optimised summarisation logic, and implemented Bedrock guardrails to ensure performance, consistency, and contextual accuracy.



Results

Wscripted saw **15–20% faster processing times** for larger books and nearly halved times for shorter content. The migration delivered **improved output quality** and **3x cost reduction** by switching from OpenAI to Claude via Bedrock.

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