



Case Study

# Digital Project Home for **US-based Oil & Gas Company**



## Client

The client is a leading US-based Oil and Gas Company. The company is engaged in the exploration, production, trade, transportation, and sale of crude oil and natural gas, and the manufacture, transportation, and sale of crude oil, natural gas, petroleum products, petrochemicals, and a range of specialty products.



## Challenges

- Modernizing employee self-service applications to improve performance, availability, scalability, and reduced operating costs.
- Managing high license cost of Oracle 12C.
- Optimizing the database by removing the redundant tables and backups.
- Decommissioning SAP NetWeaver.
- Customizing the existing workflow management process is cumbersome.
- Managing operational maintenance.





## LTI Solution

**The AWS Services were used as a part of this solution in the following ways:**

- Using CloudFront to render the UI application to improve the application performance and usability experience.
- Using S3 buckets with CloudFront to make the document available to the users near their region.
- Authentication and authorization were done using AWS Cognito. The login page was created using the Cognito service by providing CSS customizations as required.
- Monitoring of AWS services like AppSync and Lambda was done by enabling X-rays and metrics like invocation, error, and concurrent executions are tracked in CloudWatch.
- Providing all AWS services, using the CloudFormation template, and service policies with the least possible access was configured for each AWS service in the template.
- Using AWS AppSync for backend operations with AWS Lambda acting as data source and resolvers were attached to the fields with mapping templates.
- Using DynamoDB as a transactional data store, which was also the application's primary data source. DynamoDB streams are used to notify whenever a change has happened in the status of the document being reviewed.
- Using Elasticsearch (OpenSearch) for the type of functionality implemented in the application. This has improved the query speed and experience.



## Business Benefits

Collaboration between stakeholders improved by **~ 70%**

CloudFront helped to reduce the download times by **~ 90%**

SLA breaches on the projects reduced by **~ 90%**

**~ 20%** of clients' workflows got integrated into this new platform

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