

HEXAWARE

Unified Tax Intelligence Data Platform on AWS

Scalable architecture for advanced analytics

Case study



Client

| Client

- Challenge
- Solution
- Benefits
- Summary

A Big Four Tax Consultancy Company's India Wing

Our client—one of the Big Four global consulting firms—operates one of the most complex tax consultancy practices in India, spanning direct and indirect tax, corporate and personal tax, and tax litigation services.



Challenge

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A Strategic Data Backbone for Tax Services

As part of a future-forward digital transformation, our client set out to create a unified tax intelligence data platform designed to provide single-point access across all tax services while enabling cross-service intelligence, analytics, and insights.

At the heart of this vision lay a foundational requirement: a highly secure, scalable, and future-ready data lake capable of consolidating data fragmented across multiple applications and environments.

Our client needed a strategic data backbone that could support its long-term technology and business roadmap while creating the foundation for continued data transformation and future tax technology solutions.

The engagement presented both scale and complexity, driven by the nature of our client’s tax data and the breadth of its ecosystem.

Nine Independent Apps, One Unified Platform

Our client needed to consolidate data from 9 independent applications, with integration across 4 different database technologies, while creating a unified tax intelligence data platform across its tax services.

Sensitive Tax Data Required Uncompromising Security

The platform required strict security, privacy, and compliance controls for highly sensitive tax data, along with physical and logical isolation, with each application hosted in separate AWS VPCs.

A Massive Historical Data Footprint

Our client needed the platform to handle ~150 TB of historical data, while supporting 100–200 GB of incremental daily data ingestion. Beyond consolidation, our client also needed to build a foundation for cross-domain analytics and insights across tax services and support advanced analytics.

Enterprise Transformation in Four Months

The entire program—planning, design, build, testing, and rollout—had to be completed in just four months, with UAT conducted separately for each domain team. This was not a data engineering effort—it was an enterprise data platform transformation.



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A Unified Tax Intelligence Data Platform on AWS

Hexaware designed and implemented a cloud-native, fully managed AWS-based data platform, optimized for scale, cost-efficiency, and security.

The architecture was deliberately designed to:

- Decouple compute from storage
- Scale seamlessly with growing data volumes
- Enable future extensibility for **advanced analytics** and AI/ML use cases
- Maintain the highest standards of data privacy and governance

The Information Lifecycle Management Framework

The platform was implemented with an Information Lifecycle Management (ILM) framework to support the management of our client’s data across its lifecycle, while maintaining the required standards of data privacy, governance, performance, and cost-efficiency.

The framework supported the broader platform objective of managing a massive and complex data landscape while creating a foundation for future analytics and insights.

Secure and Reliable Data Ingestion

AWS DMS was used for secure and reliable data ingestion across our client’s independent application sources.

Large-Scale, Elastic Data Processing

Amazon EMR Serverless enabled large-scale, elastic data processing and supported the platform’s ability to scale seamlessly with growing data volumes.

The original solution was based on AWS Glue, but AWS recommended a shift to EMR Serverless to improve cost efficiency and scalability. While strategically sound, this introduced a steep learning curve, requiring the Hexaware team to rapidly upskill and redesign key components of the platform.

Optimized Storage and Table Management

Amazon S3 with Parquet and Apache Iceberg provided optimized data storage and table management, supporting the scale and complexity of our client’s data landscape.

Centralized Analytics and Orchestration

Amazon Redshift served as the analytical data warehouse, while Amazon Managed Airflow (MWAA) provided orchestration and workflow management.

Amazon QuickSight enabled analytics and visualization, while PostgreSQL was used for centralized metadata management.

A Foundation Built for Future Intelligence

The AWS-based data platform was designed to enable future extensibility for **advanced analytics** and AI/ML use

cases while maintaining the highest standards of data privacy and governance.

The resulting **cloud architecture** provided our client with a scalable, secure, and future-ready **unified tax intelligence data platform**.

Hexaware’s AWS Data and Analytics Strategy

As part of the AWS data platform modernization, Hexaware’s approach focused on helping our client bring together fragmented data, align multiple stakeholders, and establish a scalable foundation for analytics and insights.

Aligned Multiple Stakeholders Around One Truth

With 9 application sources and 15+ subject matter experts, aligning data definitions, transformation logic, and analytics expectations required intense collaboration and continuous negotiation to arrive at a single, consolidated version of truth.

Managed 27,000+ Tables Across 15 Databases

Our client’s landscape included over 27,000 tables, data spanning 15 databases, and terabytes of unstructured and semi-structured data. Managing metadata, performance, and data quality at this scale was a significant engineering challenge.

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Tax Intelligence at Enterprise Scale

The AWS-based data platform gave our client a scalable foundation to unify tax data, strengthen data management, and enable cross-domain analytics and insights.

9 Applications Consolidated into One Unified Platform

Our client now has data from 9 independent applications consolidated into a unified tax intelligence data platform for Tax Sphere, providing single-point access across all tax services.

4 Database Technologies Integrated Seamlessly

Data across 4 different databases were brought together into a consolidated platform, helping our client establish a single, consolidated version of truth.

Up to 150 TB of Historical Data Made Accessible

The platform was designed to handle ~150 TB of historical data, giving our client a scalable foundation for tax intelligence and cross-domain analytics.

Up to 200 GB of Daily Data Ingestion Supported

The platform supports 100–200 GB of incremental daily data ingestion, enabling our client to manage growing data volumes without compromising scalability.

Four-Month Delivery Met Aggressive Business Timelines

Despite the scale, complexity, technology pivot, and separate UAT requirements for each domain team, the entire program—planning, design, build, testing, and rollout—was successfully delivered **on time in just four months.**



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A Future-Ready Foundation for Tax Intelligence

Our client now has a unified tax intelligence data platform designed to provide single-point access across all tax services with cross-service intelligence, analytics, and insights.

The platform maintains the highest standards of data privacy and governance, with strict security, privacy, and compliance controls for highly sensitive tax data. It creates a foundation for our client’s cross-domain analytics and insights across tax services, while enabling future extensibility for advanced analytics and AI use cases. This gives our client a future-ready foundation for continued data transformation.



Ready to build a future-ready data foundation?

Explore how Hexaware can help you [modernize your data platform with AWS](#), unify fragmented data, and create a scalable foundation for advanced analytics and AI.

About Hexaware

Hexaware is a global technology and business process services company. Every day, Hexawarians wake up with a singular purpose: to create smiles through great people and technology. With this purpose gaining momentum, we are well on our way to realizing our vision of being the most loved digital transformation partner in the world. We also seek to protect the planet and build a better tomorrow for our customers, employees, partners, investors, and the communities in which we operate.

With offices across the world, we empower enterprises to realize digital transformation at scale and speed by partnering with them to build, transform, run, and optimize their technology and business processes.

Learn more about Hexaware at <https://www.hexaware.com>.

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