

Strategic Azure Data Engineering: Design and Implementation Roadmap

ORGANIZATION

Established in 2009 and headquartered in Charlotte, North Carolina, our client is a comprehensive private equity real estate firm specializing in the multifamily and self-storage sectors. The firm engages in property development, acquisition, and management across the United States. With the expertise of investment professionals with over 75 years of collective experience and a dedicated team of 100 employees, the firm effectively executes its multifaceted strategies.

CHALLENGE

Our client, a third-party hosting company, utilizes a manual reporting system in Microsoft Excel to consolidate data from various external sources. However, they lack a dedicated technical team responsible for designing, implementing, and managing an automated data pipeline. The current data collection, integration, and reporting processes are not only error-prone but also poorly documented and heavily reliant on individual contributors. To address these challenges, the client has sought a comprehensive design and roadmap for a data pipeline and a reporting data store capable of meeting diverse reporting requirements.

TECHNICAL SOLUTION

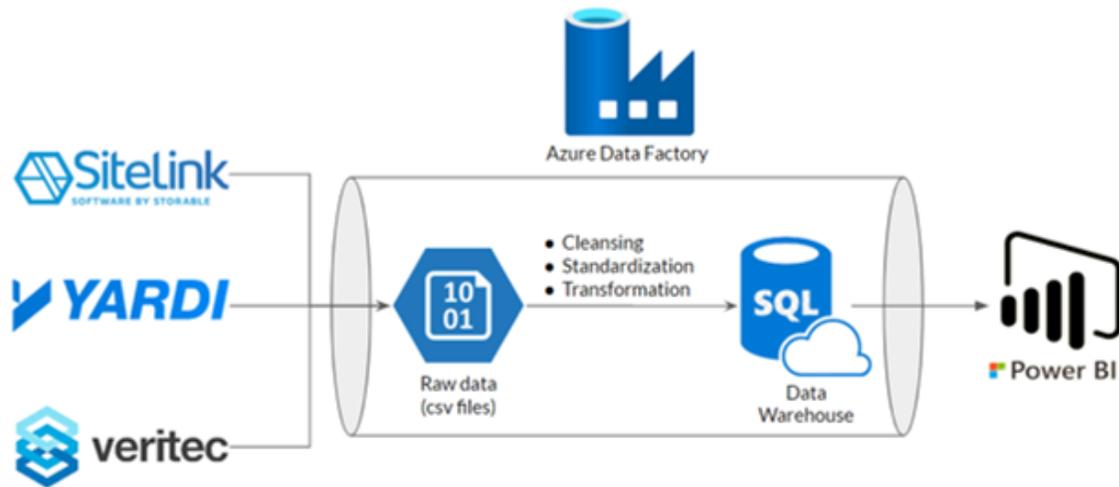
XTIVIA reviewed and comprehended the current reports, attributes, data integration, and existing issues. Additionally, we gathered the future-state reporting requirements to establish a generic data model. Furthermore, we designed a data pipeline that incorporates incremental data ingestion from three data sources via Azure Data Factory. The data is subsequently stored in Azure Blob Storage and undergoes sanity checks, cleanup, standardization, integration, and storage.

Initially, Azure SQL was recommended as the target data warehouse platform based on the client's request. However, we provided comprehensive insights into the distinctions between Azure SQL and Azure Synapse, highlighting their respective advantages and limitations. XTIVIA delivered an implementation roadmap that encompassed a meticulously detailed schedule, resource specifications, and cost projections.

Data Sources

ETL

Reporting



BUSINESS RESULT

With XTIVIA’s assistance, the client has gained enhanced awareness of the Azure platform and its offerings, including Blob Storage, ADF, Azure SQL, and Synapse. The roadmap serves as the foundation for conducting cost-benefit analyses, formulating implementation plans, allocating budgets, staffing requirements, and risk management strategies.

KEYWORDS

Azure Data Engineering, Cloud Data Engineering, Data Architecture, Azure Synapse, Azure Data Factory, Azure Data Lake Storage, Power BI

SOFTWARE

Azure Blob, ADLS (Azure Data Lake Storage), ADF (Azure Data Factory), Azure SQL, Synapse, Power BI

HARDWARE

Azure

ABOUT XTIVIA

At XTIVIA, we’ve been providing IT solutions and consulting services for over 30 years with a wide range of services, including technology assessments, IT service and asset management, software development, data analytics, cloud migration, DevSecOps, ERP, and enterprise content management. Dedicated to each discipline, ensuring that our clients receive the best possible service. Through strategic acquisitions, we’ve acquired talented people who are experts in their industries, passionate about what they do, and committed to providing exceptional service to our clients. Whether you need to improve your IT infrastructure or implement new software solutions, XTIVIA is here to help you achieve your business goals. XTIVIA has offices in Colorado, New York, New Jersey, Texas, Virginia, and India. www.xtivia.com