kyvos

SOLUTION BRIEF

SSAS to Kyvos Migration Playbook

Table of Contents

Why SSAS Users Need Kyvos

SSAS OLAP offers a powerful way to aggregate enterprise data and enables ad hoc analysis. However, it faces several limitations when data volumes grow since the tool was built primarily for on-premises use cases. Scalability is a major deterrent as there is a limit to the data size on which SSAS models can be built. Besides, the time required to process the model increases significantly with growing data sizes, making it challenging to fit SSAS OLAP in a modern data environment. When more users access these data models, high concurrency leads to increased CPU utilization of the system and query execution time.

Kyvos' AI-powered smart aggregation technology eliminates these limitations, helping organizations build aggregates on any data size while delivering high performance. It works seamlessly on any cloud platform, such as AWS, Microsoft Azure, Google Cloud Platform, Cloudera and Apache Hadoop. Semantic data models can be built through Kyvos on cloud data warehouses such as Snowflake, Google BigQuery, and Amazon Redshift, as well as other sources like Azure SQL DB and Delta Lake.

Over the years, the industry has witnessed a wave of migrations from legacy OLAP tools, brought on by their limitations to scale horizontally. As a market leader in delivering high-speed data analytics, Kyvos ensures seamless transfer of workloads from SSAS to our modernized platform, all at an unlimited scale without compromising on performance.

Auto-scaling and price-performant querying on Kyvos further allow users to optimize resource consumption by scaling up and down with predictable load changes and pre-scheduled querying activities. Advanced algorithms help create aggregates, even on massive datasets.

In addition to all these advantages, Kyvos offers best-of-breed innovations with advanced GenAI capabilities. Kyvos Copilot brings LangChain connectivity for AI initiatives, conversational interactions and contextualized business summaries to modern enterprise analytics.

The Kyvos Advantage

Use Kyvos to leverage the enormous storage and processing capabilities of modern data platforms for achieving high-speed analytics. We've put our extensive customer experience in migrating workloads from SSAS into a powerful set of tools and optimized automation.

Migrating workloads with Kyvos significantly reduces manual reviews and interventions, while covering maximum use cases to help streamline the effort in every future engagement. We go beyond simply migrating the majority of the SSAS logic and data over to Kyvos. In addition, Kyvos' real strength lies in the expertise and skills of our Professional Services consultants working with the customer team to address the exceptions.

Unprecedented Scalability

Kyvos goes beyond traditional OLAP tools like SSAS by delivering fast analytics at any scale. Whether analyzing data from the past decade or supporting thousands of concurrent users, Kyvos enables the creation of massively scalable models for both structured and unstructured data—unlocking analytics on all enterprise data without limitations.

Cost-Effective Analytics

Kyvos creates price-performant models that allow organizations to process as much data as they want while ensuring predictable analytics costs and significant savings. Its smart and intelligent caching mechanism helps control costs effectively. With elastic licensing options, Kyvos supports deployment on-premises, in the cloud, or as a managed service. Additionally, horizontal scaling capabilities drive further cost efficiency.

Semantic Performance Layer

Define all metadata and business rules in one place and make it easy for users to consume enterprise data. Our semantic performsnce layer bridges the gap between data complexity and business needs, providing a consistent data view for users across the enterprise. Additionally, users can achieve high performance across all queries without worrying about their data's size or complexity.

Migrate with Ease

Simplify migration with our easy-to-use SSAS migration utility. Kyvos' data models are similar to SSAS cubes, so one-to-one migrations are relatively easy. Get started quickly without disrupting the existing analytical environment.

Modern Architecture Built for the Cloud

Kyvos has a distributed architecture and supports parallelism for data modeling and querying. The platform's patented algorithms create smart aggregates backed by intelligent caching to work with massive data compared to SSAS, where the data model building times go up considerably as the size of data increases.

Use Your Favorite BI Tools

Connect existing BI tools, such as Excel, Looker, Tableau, Strategy, SSRS and Power BI, as well as custom visualization tools, to Kyvos data models and perform faster analytics on massive data. Our built-in MDX, DAX and SQL connectors enable seamless connections while delivering exceptionally high performance.

Why Migrate to AI-Powered Smart Aggregation?

High Scalability
Eliminate limitations of traditional OLAP and build data models on billions of rows

Faster Builds
Scalable architecture and advanced algorithms enable quick aggregations

High Concurrency
Unmatched performance even for thousands of concurrent users

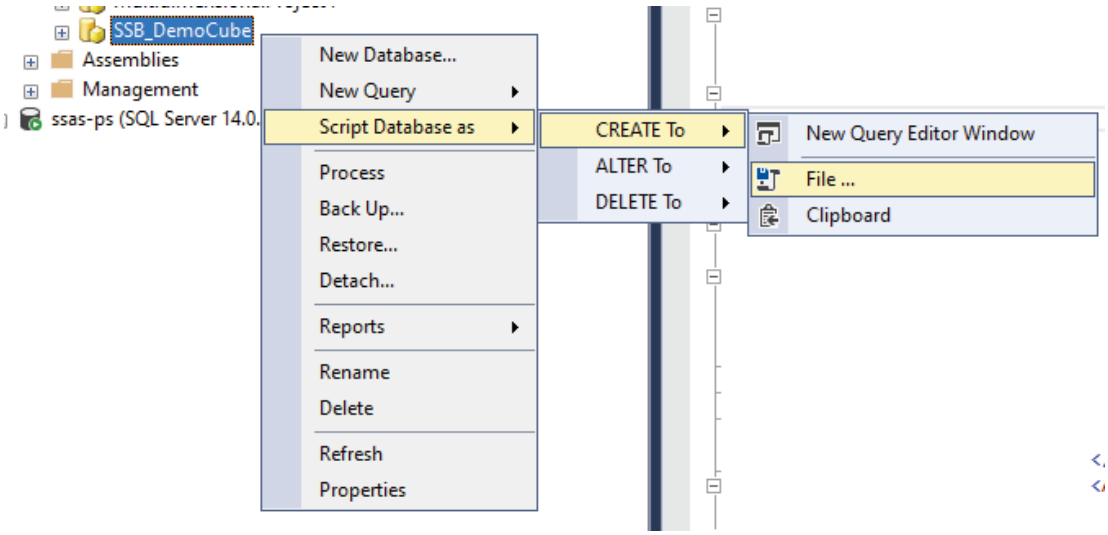
Granular Access
Store hundreds of dimensions and measures in data models without compromises

Cloud Native
Leverage the cloud's native elasticity & cost-effective storage for building aggregates & querying

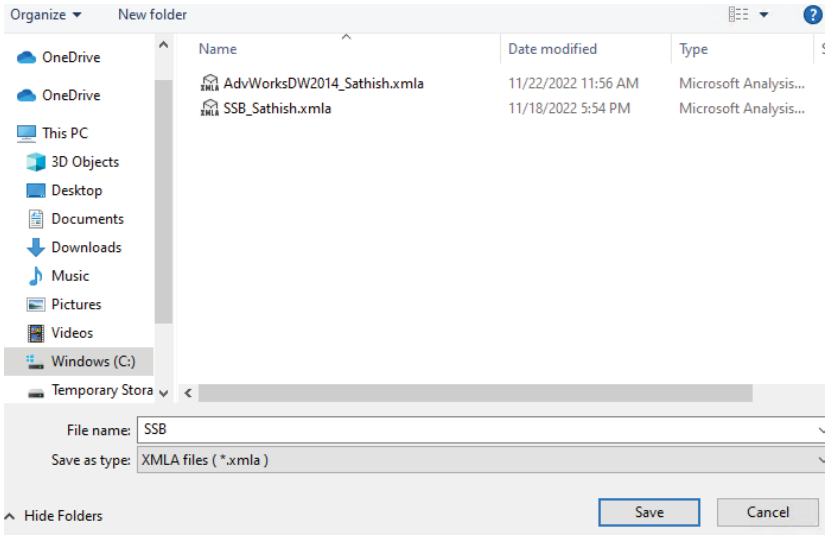
Steps for a Seamless SSAS Migration to Kyvos

Step 1: Export XMLA Files from SSAS

- Connect to SSAS Server, and then expand databases
- Right-click on the database
- Click on “Script Database as”
- Toggle on “Create To” and select “File”.

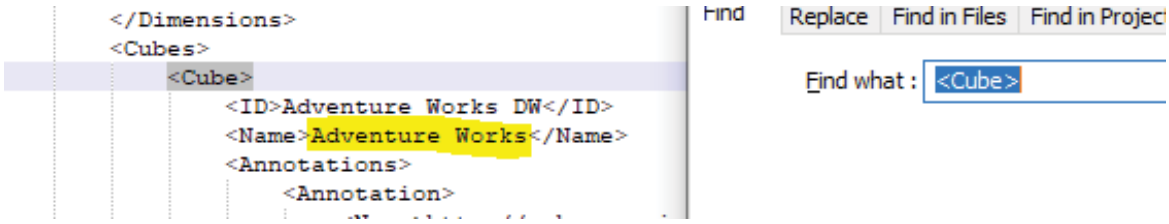


- Save the XMLA file in the destination folder.

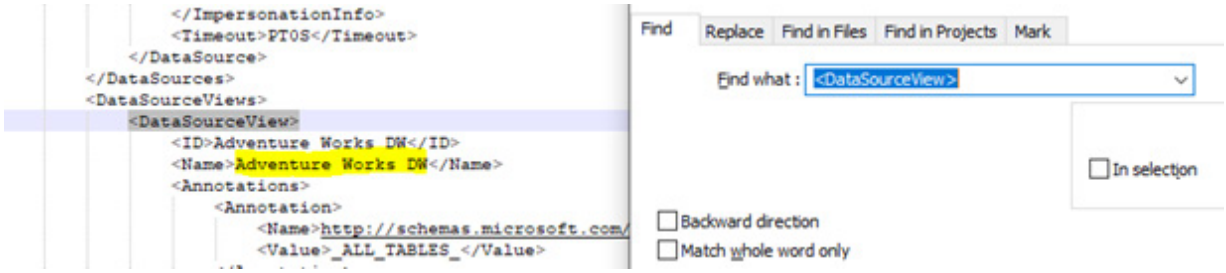


Step 2: Identify SSAS Database name, Cube name, and Datasource View Name

- **Database Name** – It will be available on lines 4 and 5 of the XMLA file.
- **Cube Name** – Search "<Cube>" in the given XMLA file. The "Cube Name" will be visible on the Name tag.



- **Datasource View Name** – Search "<DataSourceView>" in the given XMLA file. The "datasourceviewname" will be visible on the Name tag.



Step 3: Migrate SSAS Cubes to Kyvos

- Place the exported XMLA file in the input folder using this path: (C:\Users\abc\SSAS_Migration_Utility\input\)
- Specify SSAS Databasename, Cube name, and DatasourceViewName in the config file.
- Run the runUtility.bat file in C:\Users\abc\SSASMigration_Utility\scripts\ folder.
- After successfully executing the windows batch file, users will view the Register files, DRD, and data model in Kyvos as specified in the config file.

Step 4: Modifications Required in Kyvos to Start Building Data Models

After migrating SSAS cubes to Kyvos, there are some adjustments to be made for seamless working. These include:

- All the Register files (RFs) will become invalid post-migration. Specify the connection details to validate them.
- Ensure that joining columns used in DRD and columns referred to when creating Measures and Dimensions in the cube have the same data type while validating the RF. All RFs in DRD will be used as a dimension after migration.
- Specify Fact tables in DRD.
- After migration, Validation of the Semantic Model followed by processing is required. If there are any MDX/custom calculations (which have been migrated into the model) they should also be validated prior to semantic model browsing/querying.

Technical Specifications

Powerful Data Model	Intuitive drag and drop UI for data modeling. ML-powered smart recommendation engine to build intelligent aggregates automatically. Support for recursive, unbalanced, ragged and alternate hierarchies, as well as custom rollups. Accurate distinct count on billions of transactions. Provision for many-to-many relationships. Scheduled and automated incremental builds. Sliding window for automated data truncation during builds. Data model modifications without the need to rebuild.
Data Platforms	Native support for all cloud platforms including AWS, Microsoft Azure and Google Cloud Platform. Support for cloud data warehouses such as Snowflake, Redshift, BigQuery, Teradata, Oracle RDS, Databricks' Delta Lake and Hive Support for the latest releases of Cloudera.
BI and Data Science Tools	Support for all BI tools such as Tableau, Strategy, SSRS, Excel, XLcubed, Looker and Power BI and data science engines like R and Python Open API and Library Connectivity using DAX, SQL or MDX, JAVA and REST APIs or existing libraries like OLAP4j or Python's OLAP.XMLA. Plugin for Excel with advanced visualization capabilities. Custom connectors for Tableau and Strategy.
Kyvos Visualization Tool	Native visualization layer with an intuitive drag-and-drop interface for self-service analytics. Extensive library of charts including bar, line, GIS, heat map, treemap and other advanced visualizations. Built-in support for cohort analysis on massive datasets. Auto-visualization feature automatically chooses correct visualization based on type of data being loaded. Ability to create custom visualizations using D3.js. Support for export and sharing of worksheets and dashboards for enterprise-wide collaboration.
Optimized Performance at Massive Scale	Scale-out querying to support multiple groups and users. Intelligent multi-level caching based on query patterns/usage. Segmentation feature enables dedicated query engines for mission critical functions. Querying and drill through on raw data using Presto & Hive.
Enterprise Security Framework	SOC2 Compliant. Row and column level security, role-based access control and personal access token-based authentication. AD integration with support for multiple LDAP accounts. TLS encryption with mutual authentication for all internal communication. SSO through providers such as Okta, SiteMinder using OIDC (OAuth 2.0 protocol). Integration with enterprise security protocols like Knox, Ranger, Sentry and Kerberos, as well as custom APIs. Azure Key Vault (with AES encryption) and AWS Secrets Manager support for storing sensitive information.
Easy to Deploy and Manage	Automated wizard and template-based deployment on cloud. Built-in validation framework for sanity check on deployment. Scheduled autoscaling on cloud for resource optimization. No data movement or additional infrastructure needed for storing data models. Automatic health monitoring/management of Kyvos components. Consolidated dashboard to monitor resource consumption.

About Kyvos

Kyvos semantic intelligence accelerates all your BI and AI initiatives. The platform's ultra-wide and deep data models deliver lightning-fast analytics at infinite scale, accuracy and maximum savings. It offers high-performance storage for structured or unstructured data and trusted data for AI applications.

The infrastructure-agnostic platform is critical for any modern data or AI stack, whether on-premises or on cloud. Leading enterprises use Kyvos as a universal source for conversational analytics, faster insights, unified access and scalable performance.

To learn more, request a demo now.

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