

WEBINAR

Expand Data Access for SAP Analytics Cloud

**Live, Import and Export
connections to non-SAP sources**

Today's Session

Key Topics

- Introduction
- SAC Data Connectivity
- APOS Data Gateway
- Expanded Import Connectivity
- Bi-directional Data Movement
- Exporting SAC Data
- Expanded Live Connectivity

- Q&A – see webinar console

Today's Presenters:



ALLAN PYM

COO
APOS



ALAN GOLDING

Solution Consulting Manager
APOS



Who is APOS?

- Formed in 1992
- Focus on BI & Analytics solutions
- Software solutions to enable BI platform management, BI report publishing, and analytics data connectivity
- Simplifying, automating, extending SAP Analytics Cloud, SAP BusinessObjects, and SAP data analytics
- Strategic SDK development and consulting
- Hundreds of customers globally



HOUSEKEEPING



You will have access to the **slides** via email



You will get the **recording** within 24 hours



Download the **handouts** in the panel



Tell us how we did in the **survey**

APOS Solutions for SAP Analytics Cloud



APOS Publisher for Cloud

- Automated broadcasting and distribution of personalized SAC reports to target user groups
- Distribute reports to the right people, right time, right location, right format
- Analysis for Office broadcasting and scheduling

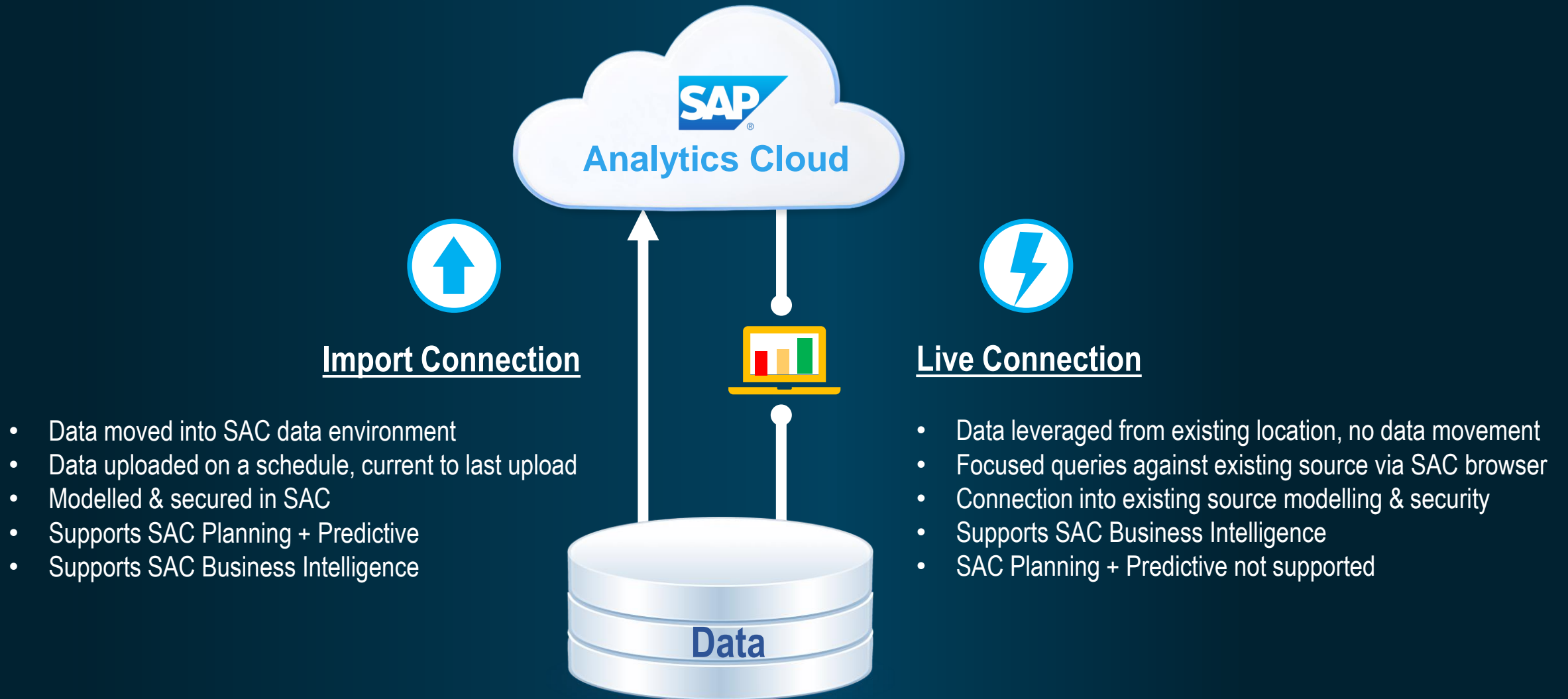


APOS Data Gateway

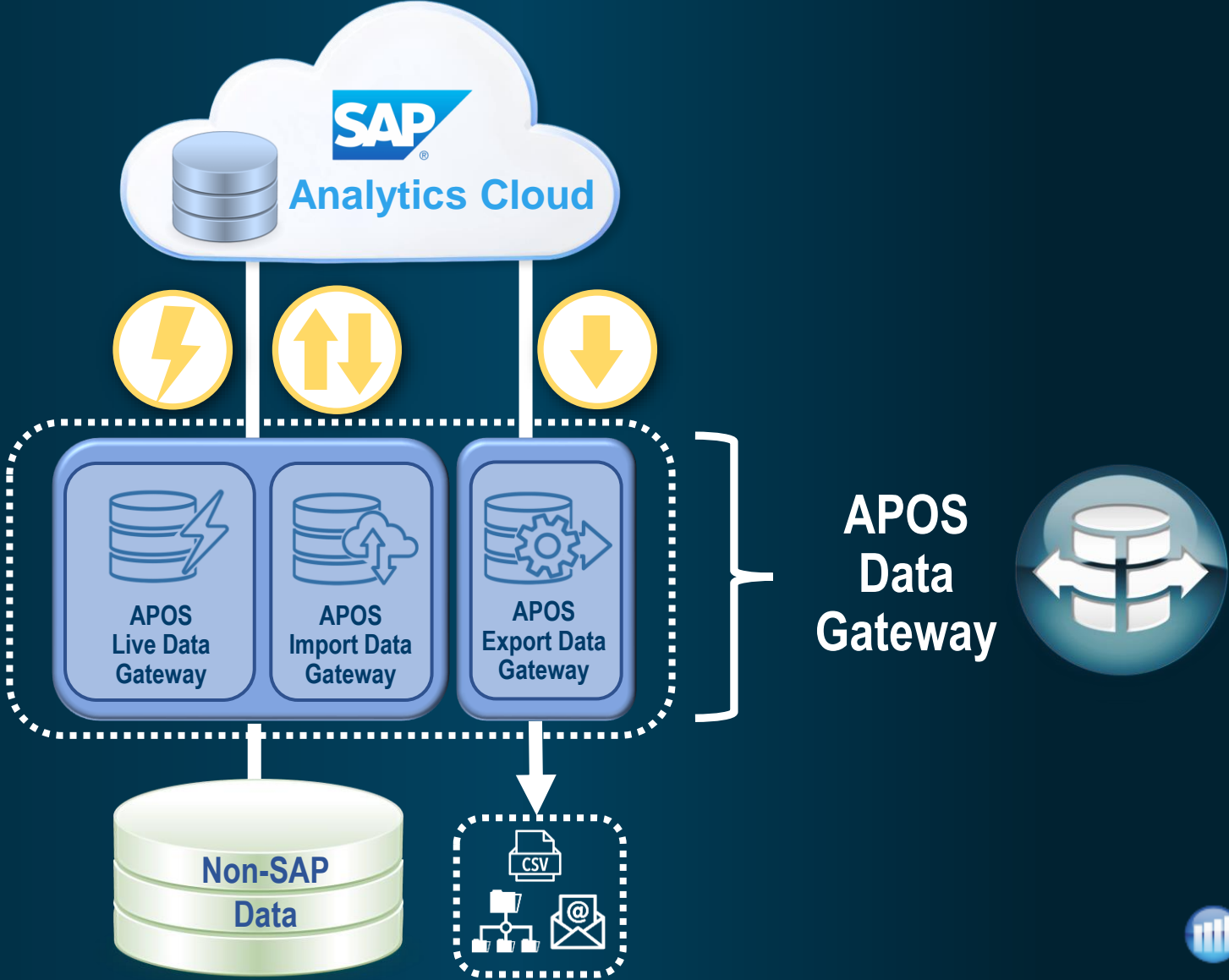
- Live connectivity from SAC to wide range of data sources
- Import data from wide range of sources into SAC
- Extract and Export data from SAC

SAP Analytics Cloud – Connectivity Options

SAC Connectivity

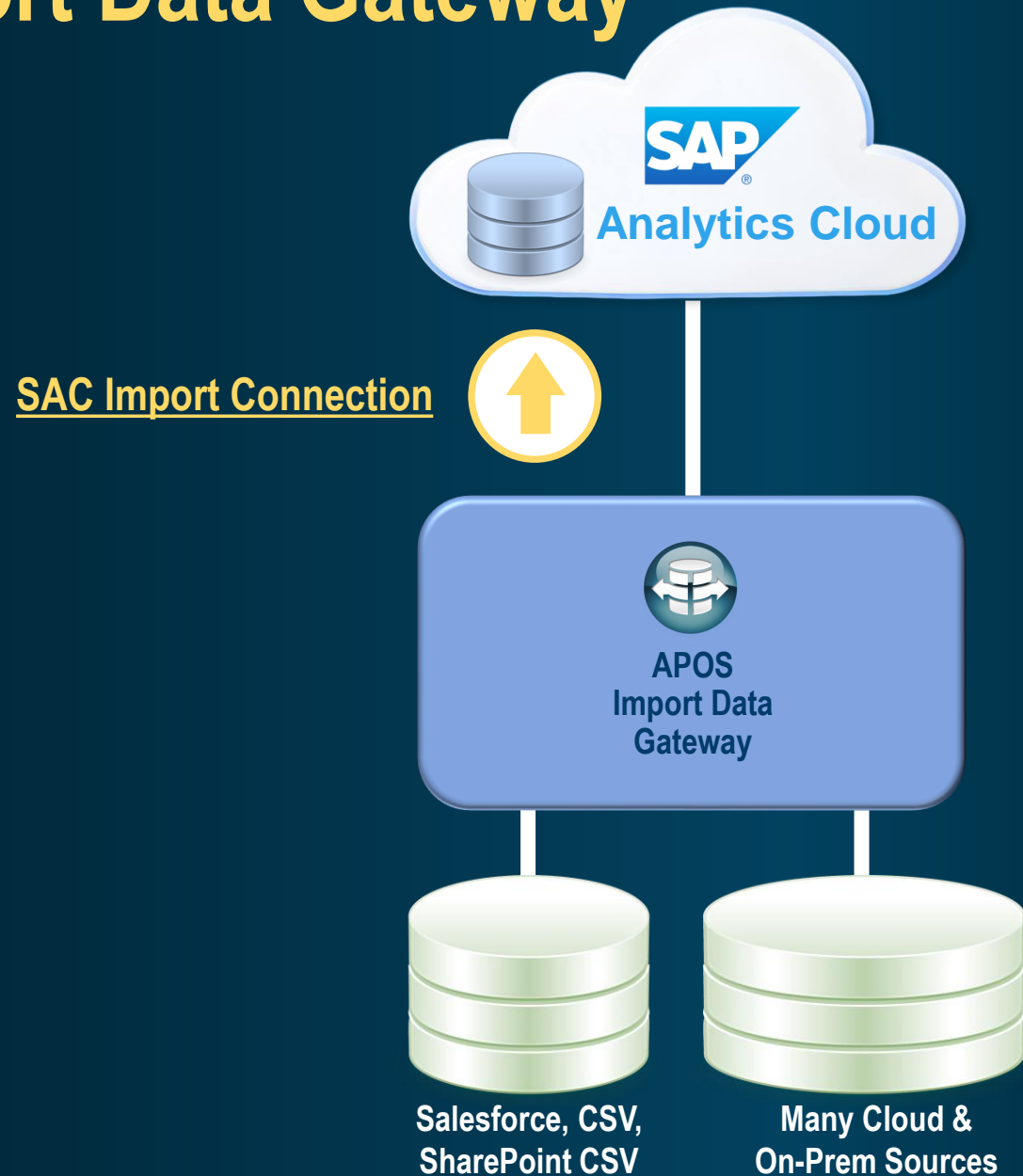


Expanded SAC Connectivity

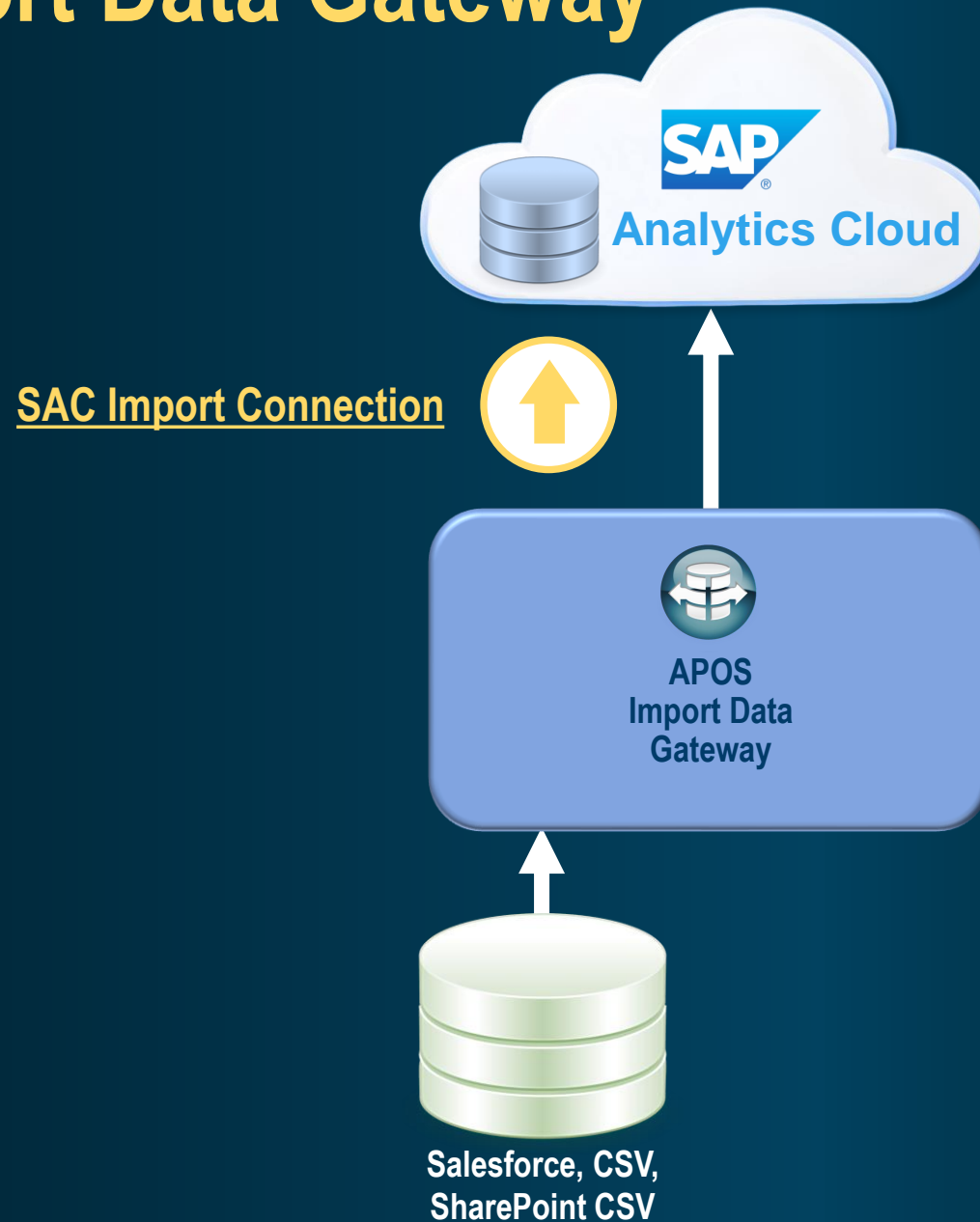


APOS Import Data Gateway

APOS Import Data Gateway



APOS Import Data Gateway



APOS Import Data Gateway

The screenshot shows the SAP Help Portal interface. The top navigation bar includes the SAP logo, 'Help Portal (Documentation)', and links for 'Browse by Product', 'SAP Learning Journeys', and 'What's New'. The main content area is titled 'Import Data Connection to Salesforce' and includes a 'Caution' box with a deprecation warning. A left-hand navigation menu lists various data connection topics, with 'Import Data Connection to Salesforce' highlighted.

SAP Help Portal (Documentation) Browse by Product SAP Learning Journeys What's New

★ Favorite PDF Download PDF Share

Import Data Connection to Salesforce

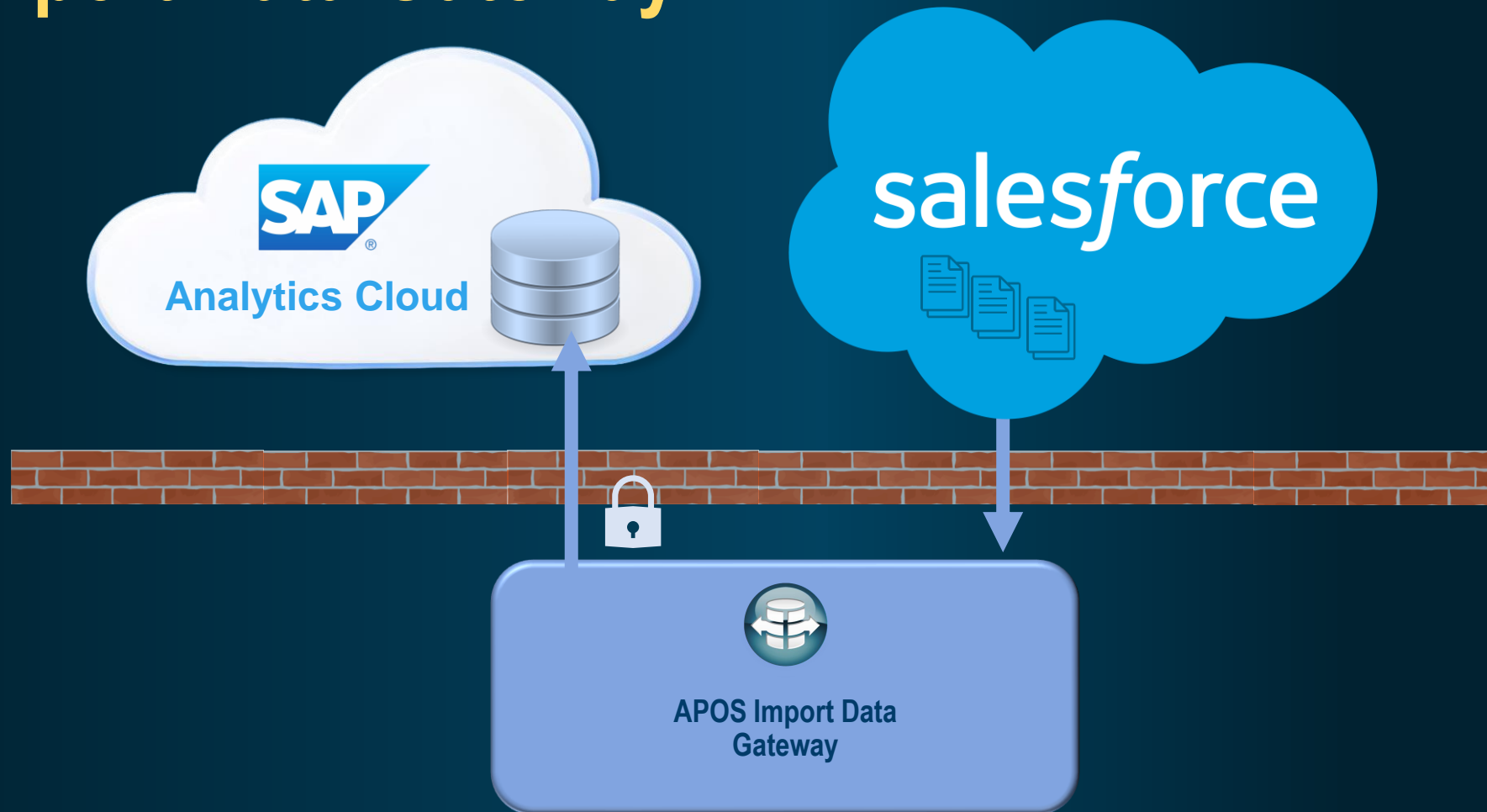
You can create a connection that allows you to import data from salesforce.com (SFDC).

Prerequisites

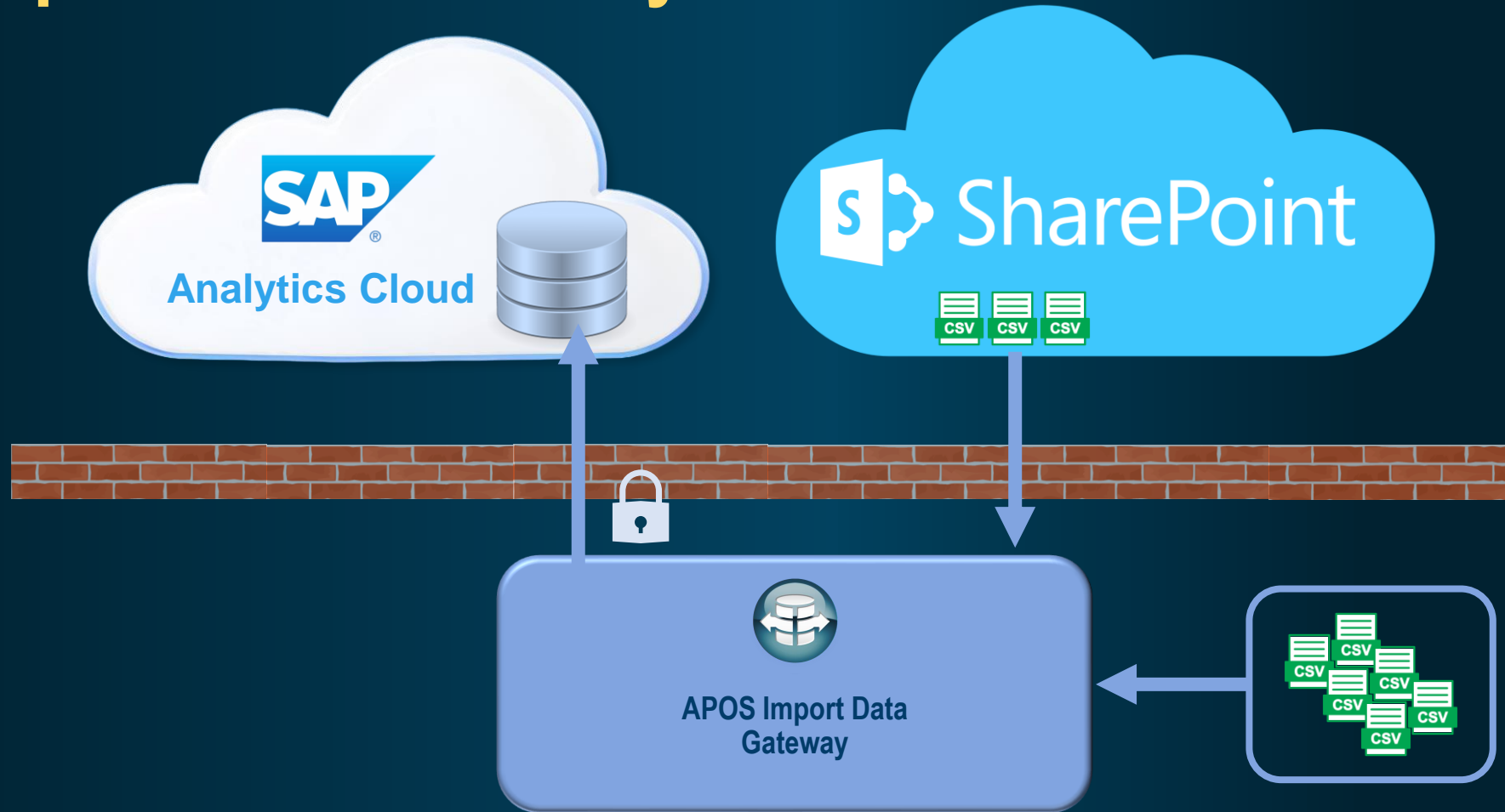
⚠ Caution
Salesforce connection will be deprecated in QRC4 2024. Please utilize a SQL Database connection using JDBC or APOS Live Data Gateway for Acquired Connections. See SAP Note [3402695](#).

- Import Data Connection to OData Services
- Import Data Connection to SAP Integrated Business Planning
- Import Data Connection to Salesforce**
- Import Data Connection to an SQL Database
- Import Data Connection to Qualtrics
- > Use SAP Integration Suite Open Connectors
 - Sharing an Import Data Connection
- > Creating Export Data Connections
- > Data Preparation and Wrangling (Datasets and Models)
- > Data Analyzer

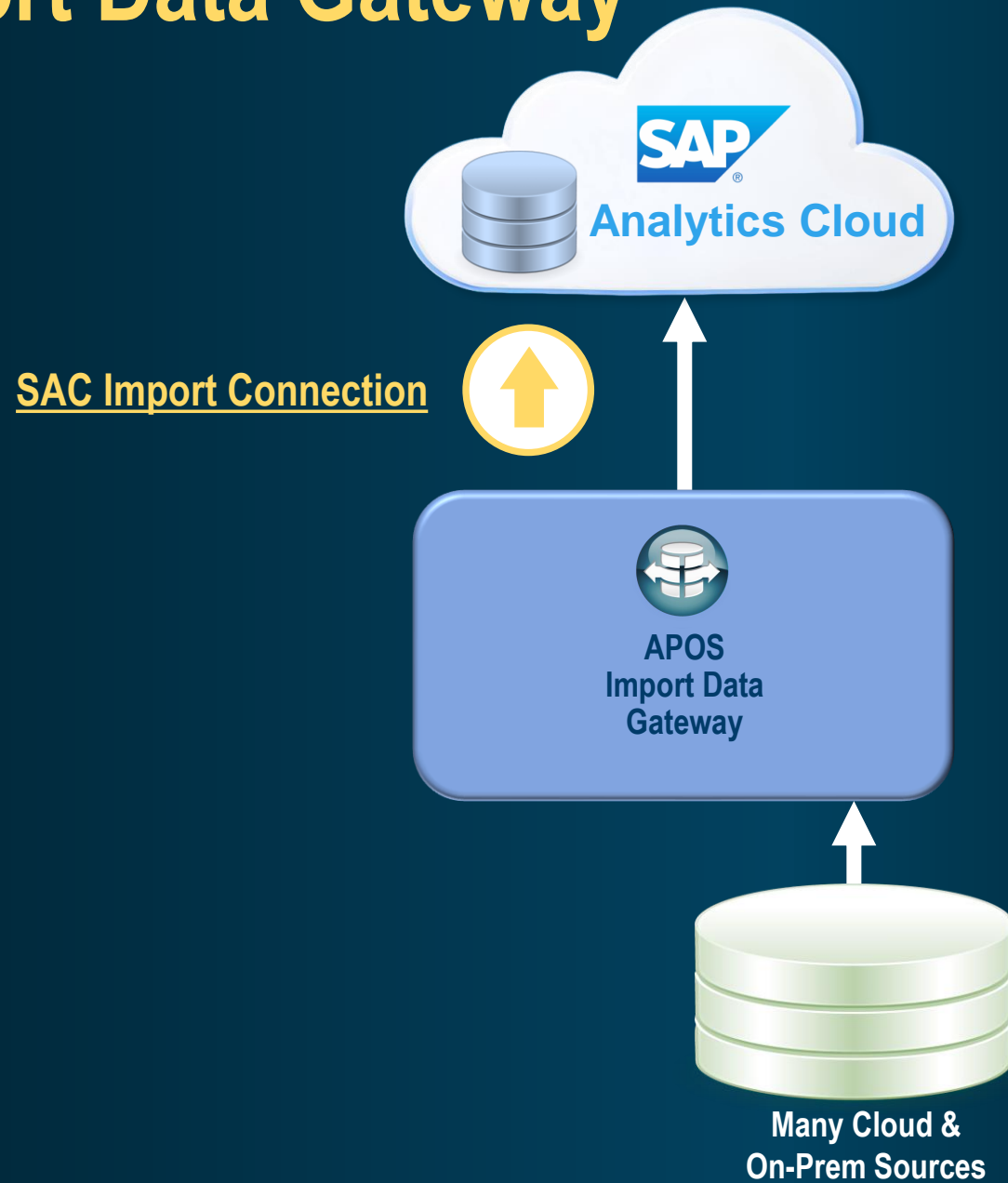
APOS Import Data Gateway



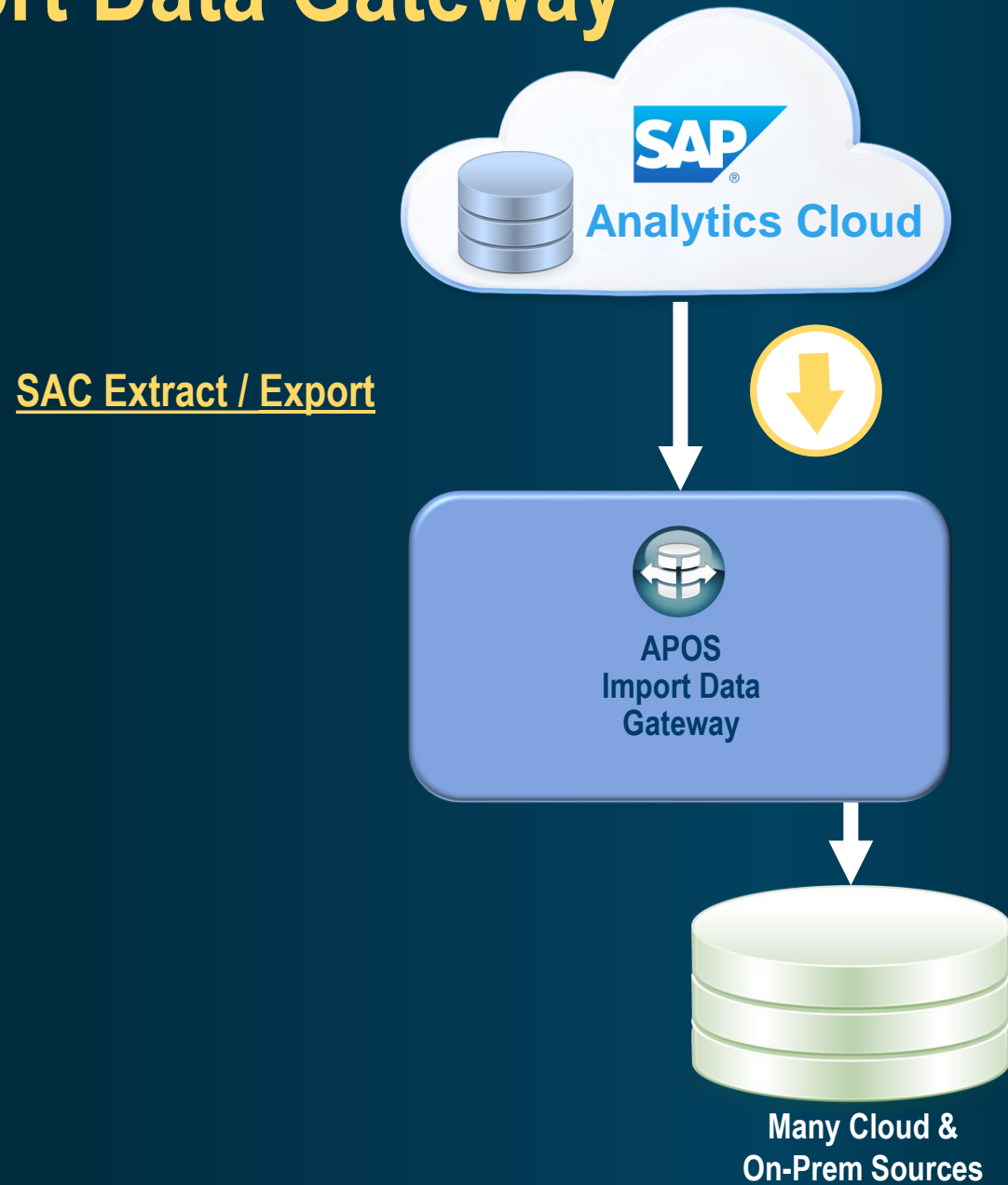
APOS Import Data Gateway



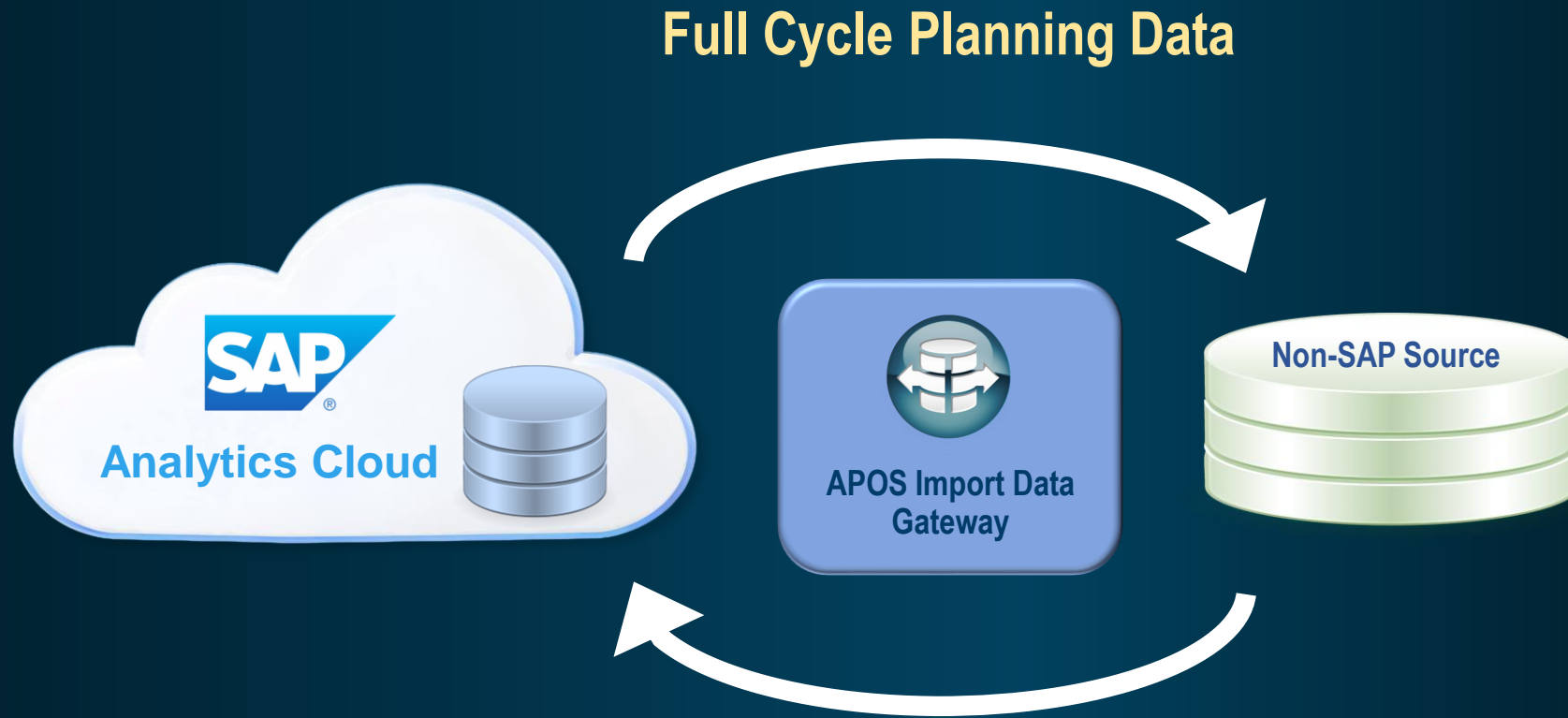
APOS Import Data Gateway



APOS Import Data Gateway



APOS Import Data Gateway



Bi-Directional Data Process



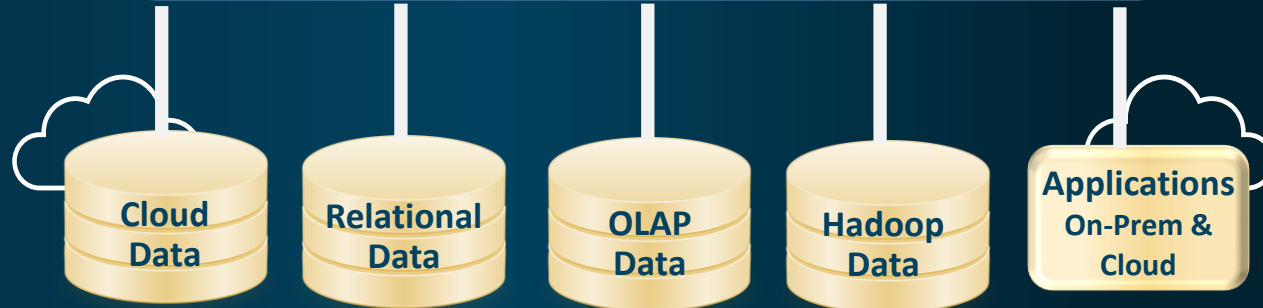
Alan Golding
Solution Consulting Manager
APOS

APOS Import Data Gateway

Direct SAC Import connection

No SAP Cloud Connector/Agent required

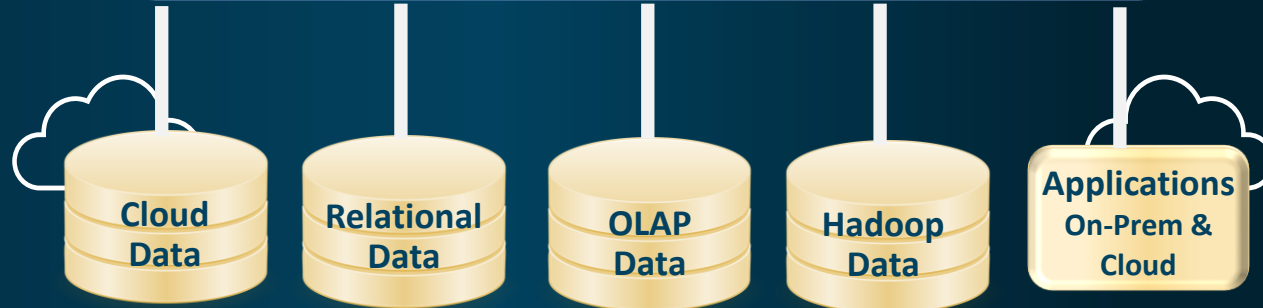
- Easy to deploy
- Secure communication
- Scheduled data uploads
- Full or Delta data uploads
- Field Mapping
- Data Modelling



APOS Import Data Gateway

Direct Extract and Load of SAC data

- Secure communication
- Scheduled data exports
- Extract SAC Planning data
 - Load into external database
 - Load into CSV file



Supported Data Sources

- Amazon Athena
- Amazon Aurora
- Amazon EMR
- Amazon Redshift / Redshift Spectrum
- Amazon S3
- Azure Analysis Services
- Azure Cosmos DB
- Azure Data Lake
- Azure SQL Database
- Azure SQL Data Warehouse
- Cloudera
- Databricks
- DB2
- Denodo
- Google Analytics
- Google BigQuery
- Google Cloud Platform
- Hortonworks
- Informix
- Microsoft SQL Server
- Microsoft Analysis Services
- Azure Blob
- Mongo DB, Mongo DB Atlas
- MySQL
- Netezza
- Oracle
- Oracle Exadata
- Palantir
- Postgres
- Presto
- Salesforce
- Snowflake
- Sybase IQ, Sybase SQL Anywhere
- Teradata
- SAP BusinessObjects Universes (UNV, UNX)
- SAP BW - version 7.3 and higher
- JDBC connectivity

Extended Data Sources: 100+ additional data source and application connection options

<https://www.apos.com/content/apos-live-data-gateway-data-sources-supported>

Import Data Gateway

Secure Communication

- OAuth is used when communicating with SAC, SharePoint and Salesforce via API access
- Secure communication to databases happens through JDBC drivers and user authentication

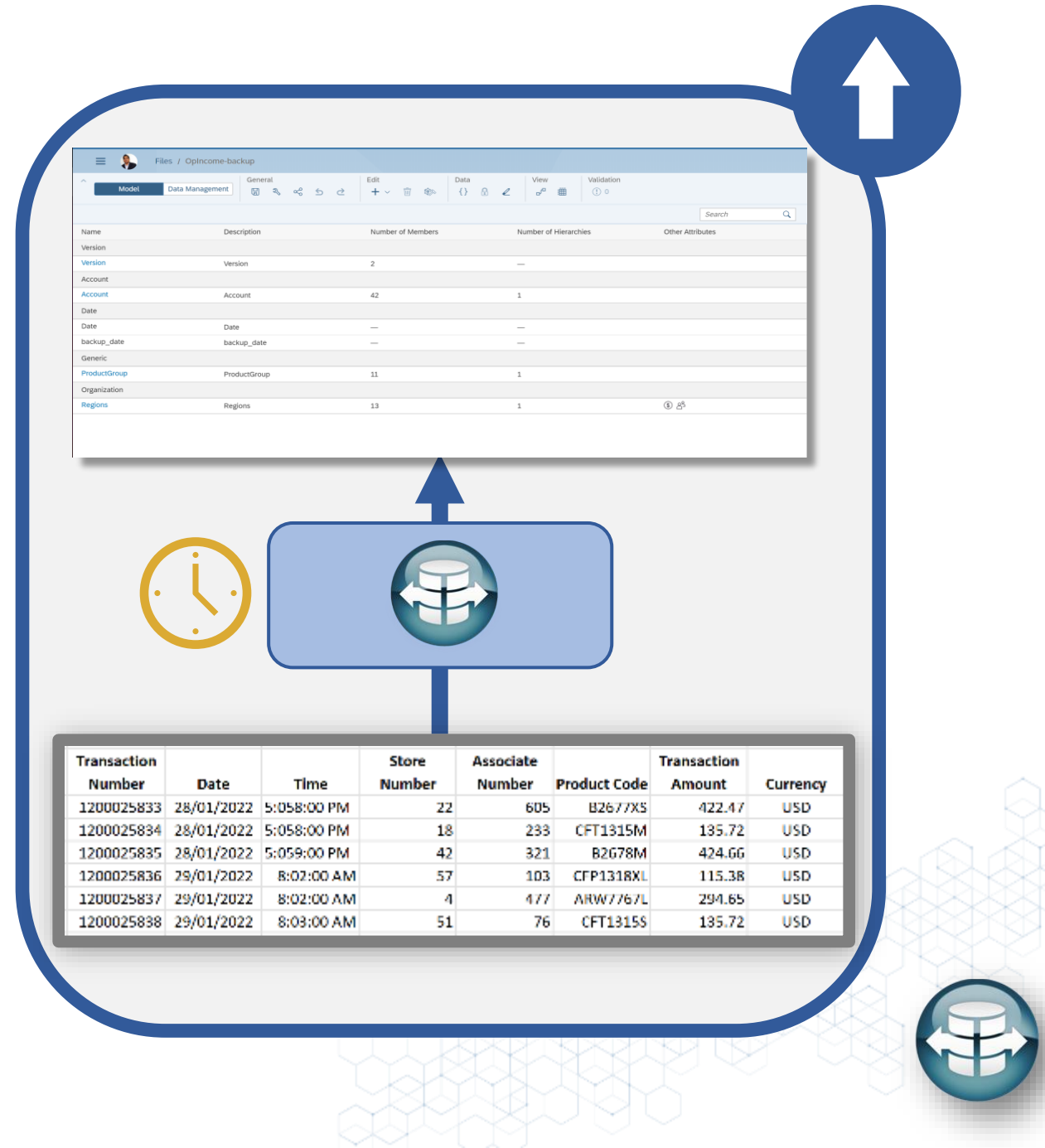


Import Data Gateway

Scheduled Data Uploads

Data loads can be set up on a recurring schedule

- Hourly
- Daily
- Weekly
- Monthly
- On-demand



Import Data Gateway

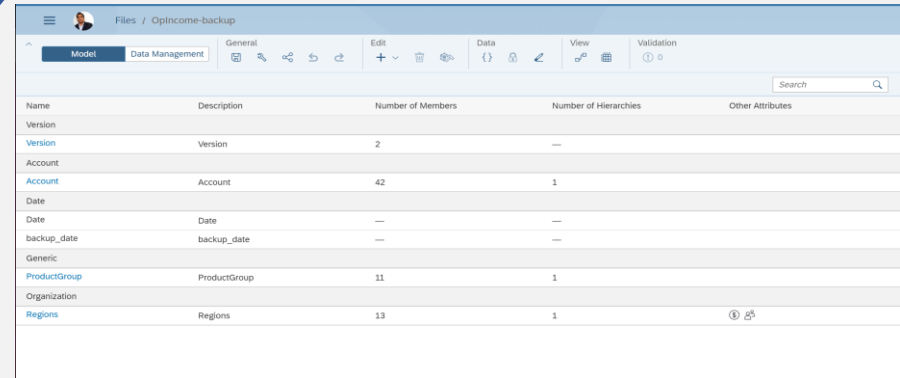
Full or Partial Data Uploads

Multiple data load options offered

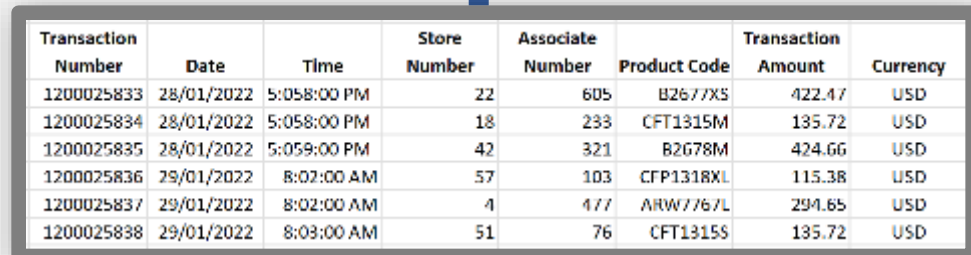
- Full load
- Incremental load
- Truncate data first
- Overwrite

SAC Import methods supported

- Master and fact data – update
- Master data – update
- Fact data – append
- Fact data – clean and replace
- Fact data – update



Name	Description	Number of Members	Number of Hierarchies	Other Attributes
Version	Version	2	—	
Account	Account	42	1	
Date	Date	—	—	
backup_date	backup_date	—	—	
Generic				
ProductGroup	ProductGroup	11	1	
Organization				
Regions	Regions	13	1	



Transaction Number	Date	Time	Store Number	Associate Number	Product Code	Transaction Amount	Currency
1200025833	28/01/2022	5:058:00 PM	22	605	B2677XS	422.47	USD
1200025834	28/01/2022	5:058:00 PM	18	233	CFT1315M	135.72	USD
1200025835	28/01/2022	5:059:00 PM	42	321	B2G78M	424.66	USD
1200025836	29/01/2022	8:02:00 AM	57	103	CFP1318XL	115.38	USD
1200025837	29/01/2022	8:02:00 AM	4	477	ARW7767L	294.65	USD
1200025838	29/01/2022	8:03:00 AM	51	76	CFT1315S	135.72	USD



Import Data Gateway

Field Mapping

You can map your source and destination fields so that data is correctly and effectively imported.

This is possible whether you are importing data into an SAC Model, or to any other type of database.

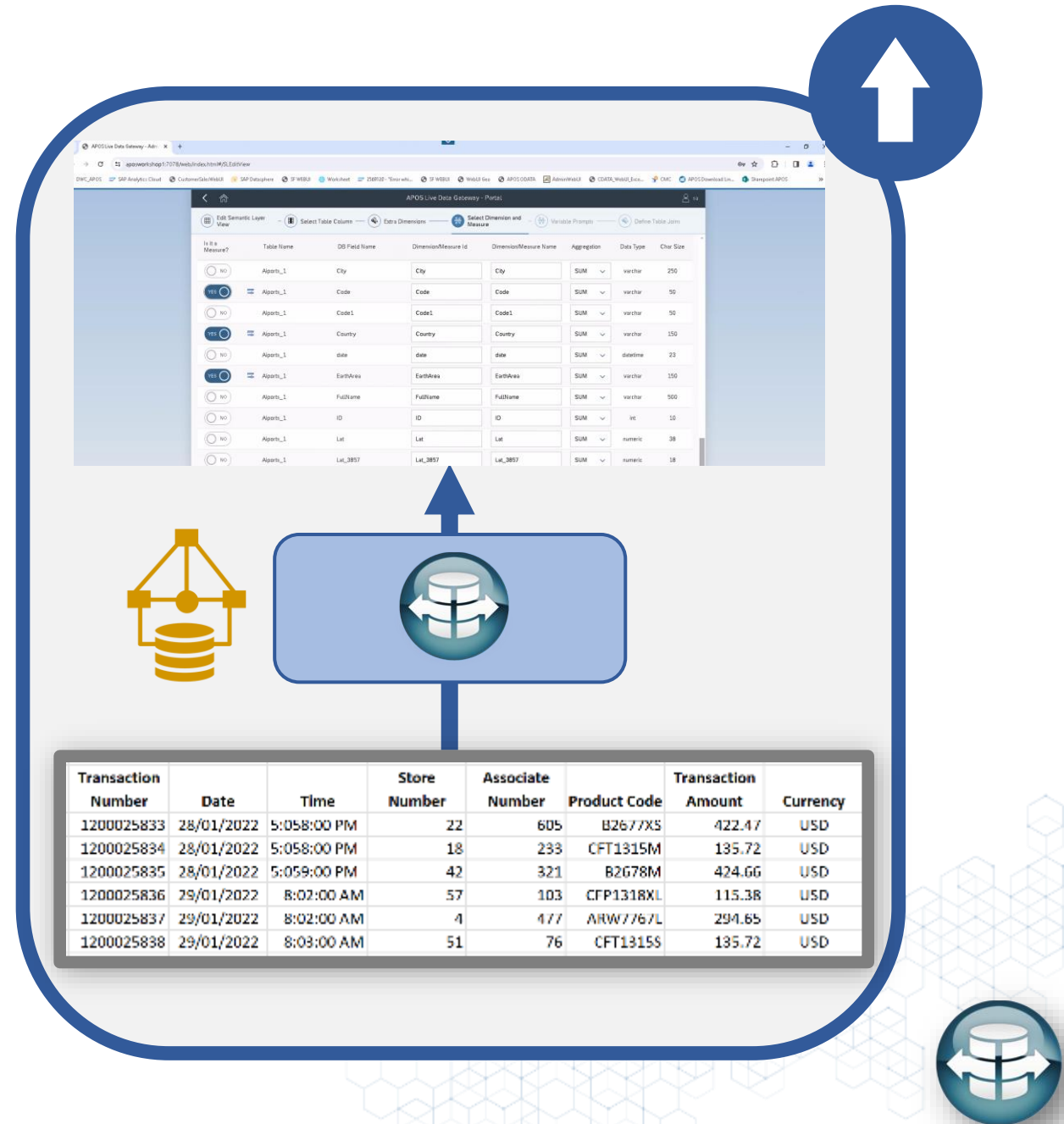


Import Data Gateway

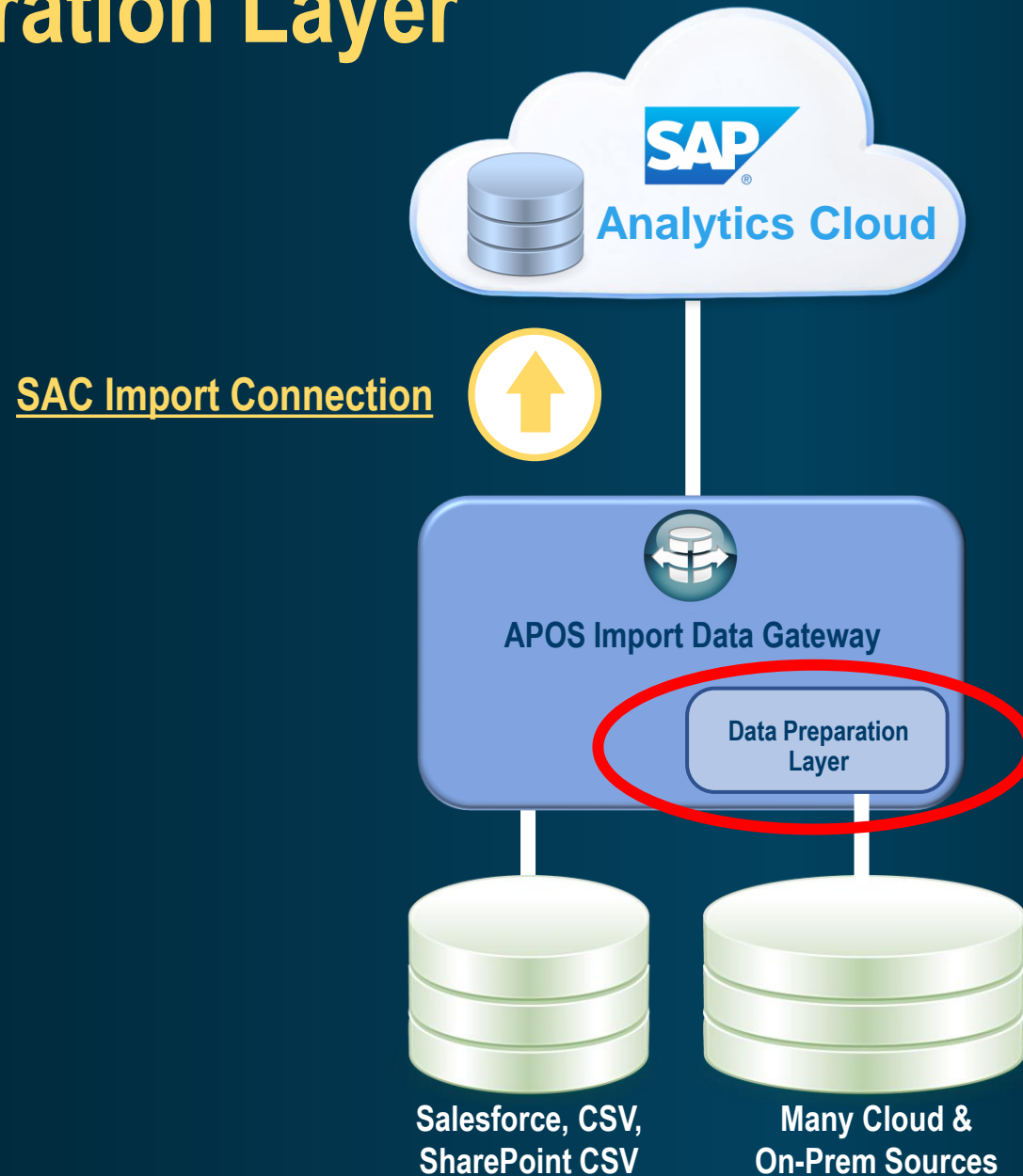
Data Modelling

There is also the option to model your data in our web-based Data Preparation Layer.

This allows you to target specific datasets you wish to import, rather than importing a full database.



Data Preparation Layer

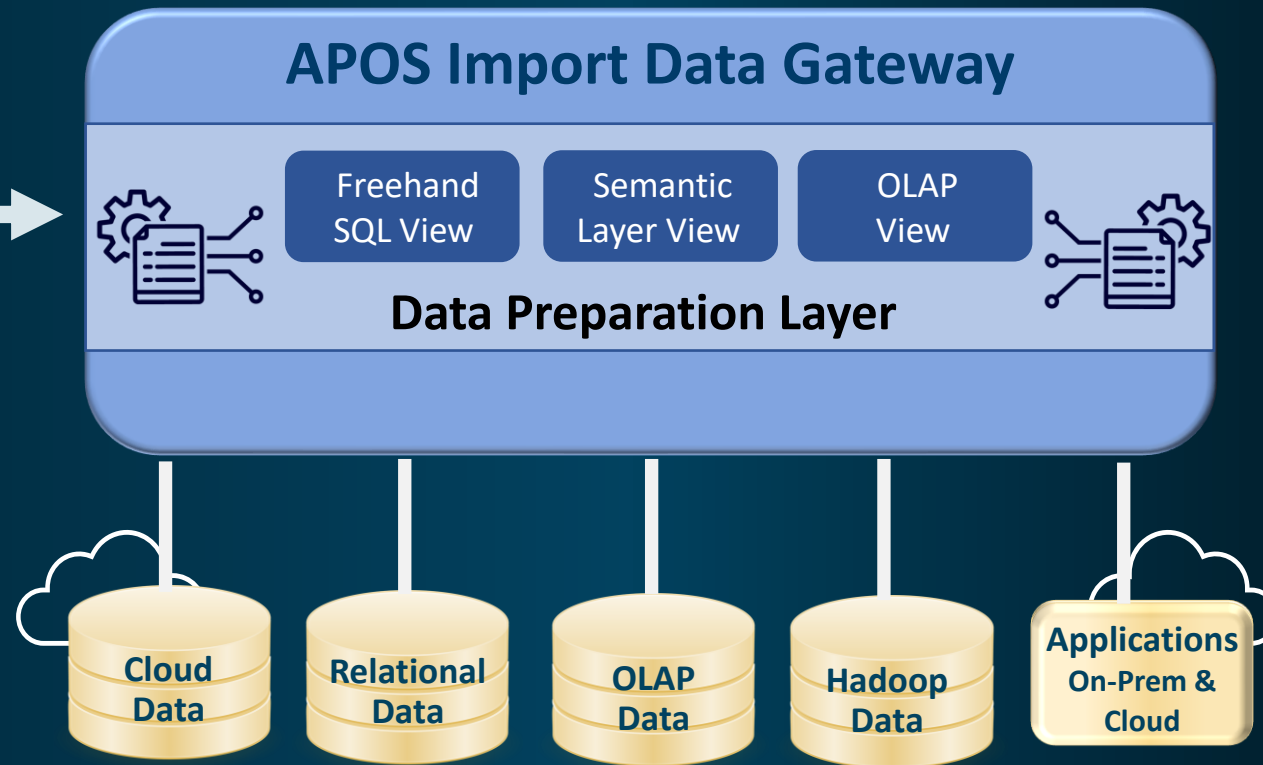
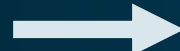


Data Preparation Layer

Data Preparation Layer

Key Functions

- Define Measures and Dimensions
- Define what data fields are exposed
- Manage table joins
- Optimize with data transformations



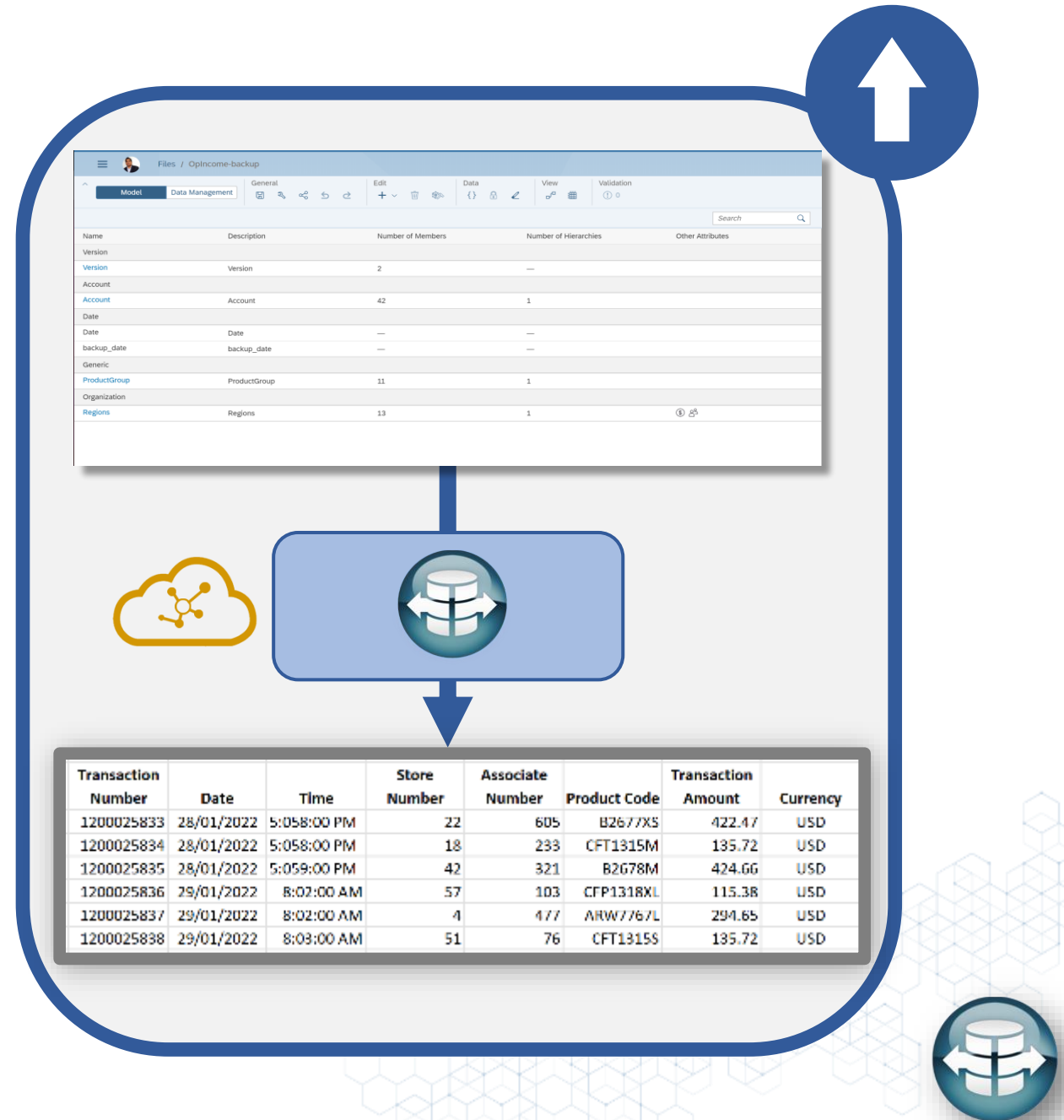
Import Data Gateway

SAC Planning Data Extract

On top of being able to import data into an SAC Planning model we offer the ability to extract data out of an SAP Planning model.

This extraction process allows you to load data back to the source database.

- Load SAC Budgeting data back into original source system
- Leverage enhanced SAC Planning data in other related processes



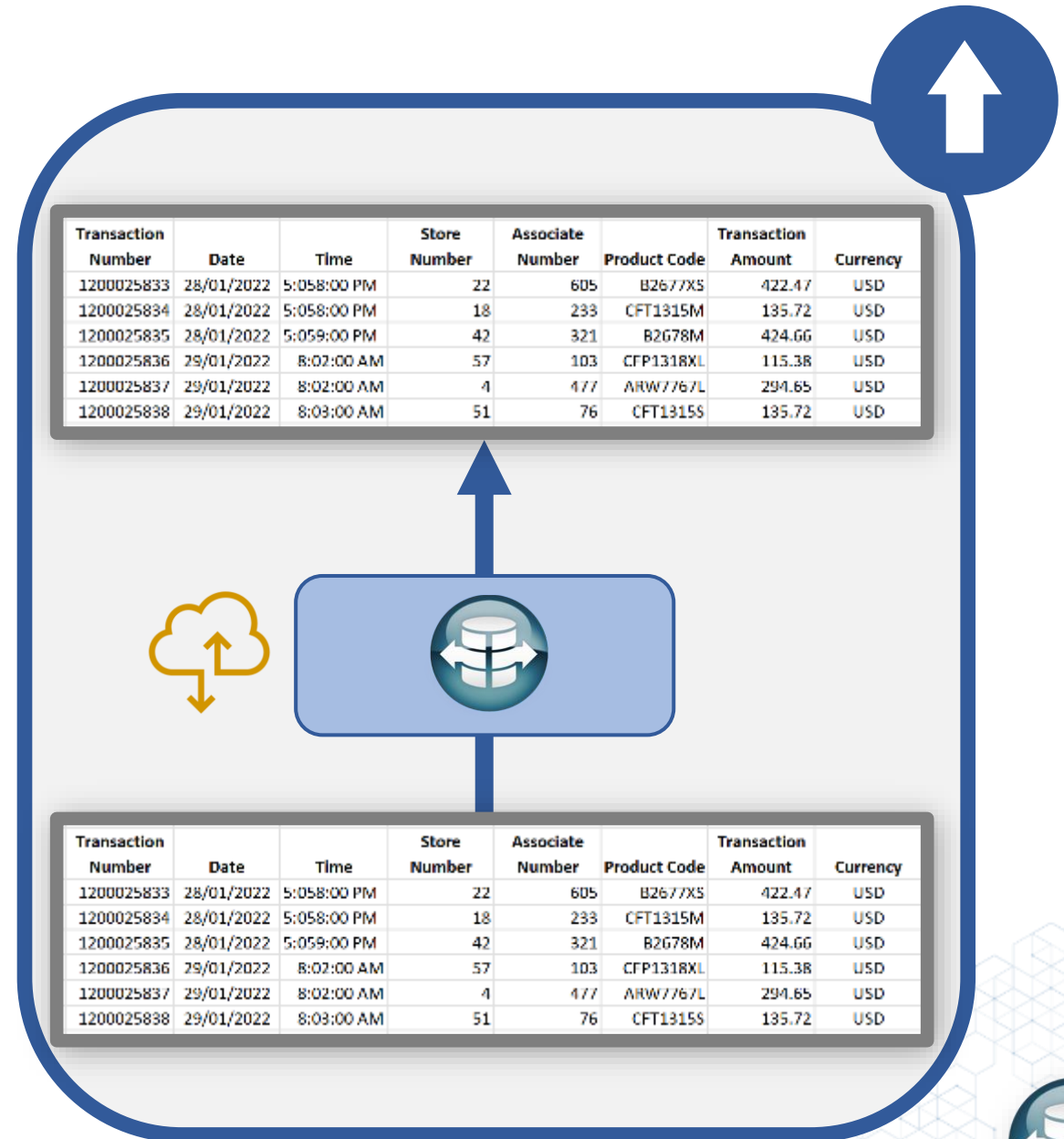
Import Data Gateway

Strategic Data Movement

For non-SAC scenarios:

Scheduled data loads between different database platforms.

Removes complexities of data migrations and allows for data transformations between migrations.



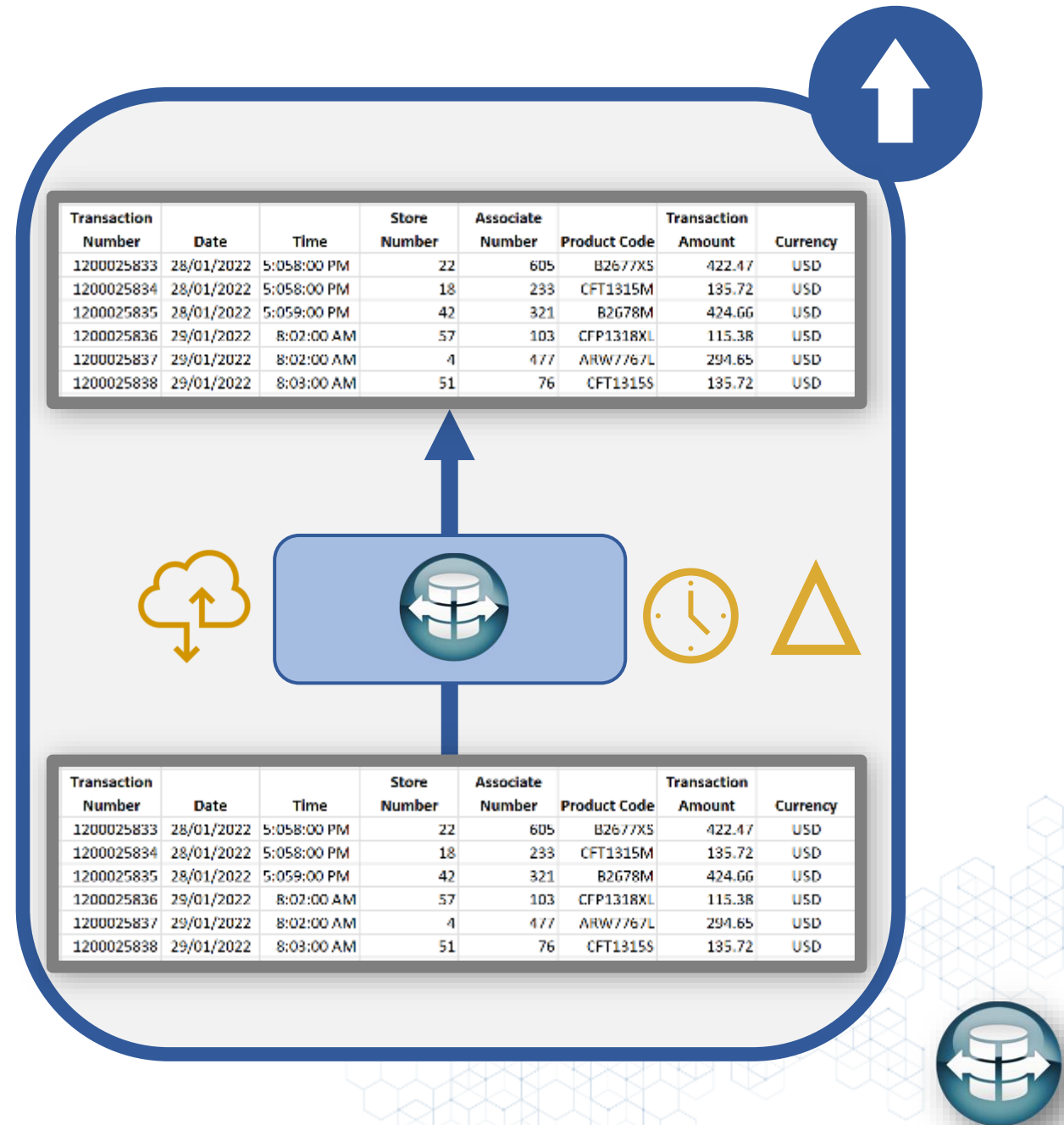
Import Data Gateway

Near Real-Time Import Data

- Frequent data uploads
- Delta-only data uploads

Combining these two features allows for import processes load only new data on a frequent basis to have SAC imported data being near real-time, even if a live connection isn't available.

Near real-time data means that both SAC Planning and SAC BI users can benefit from very current data.



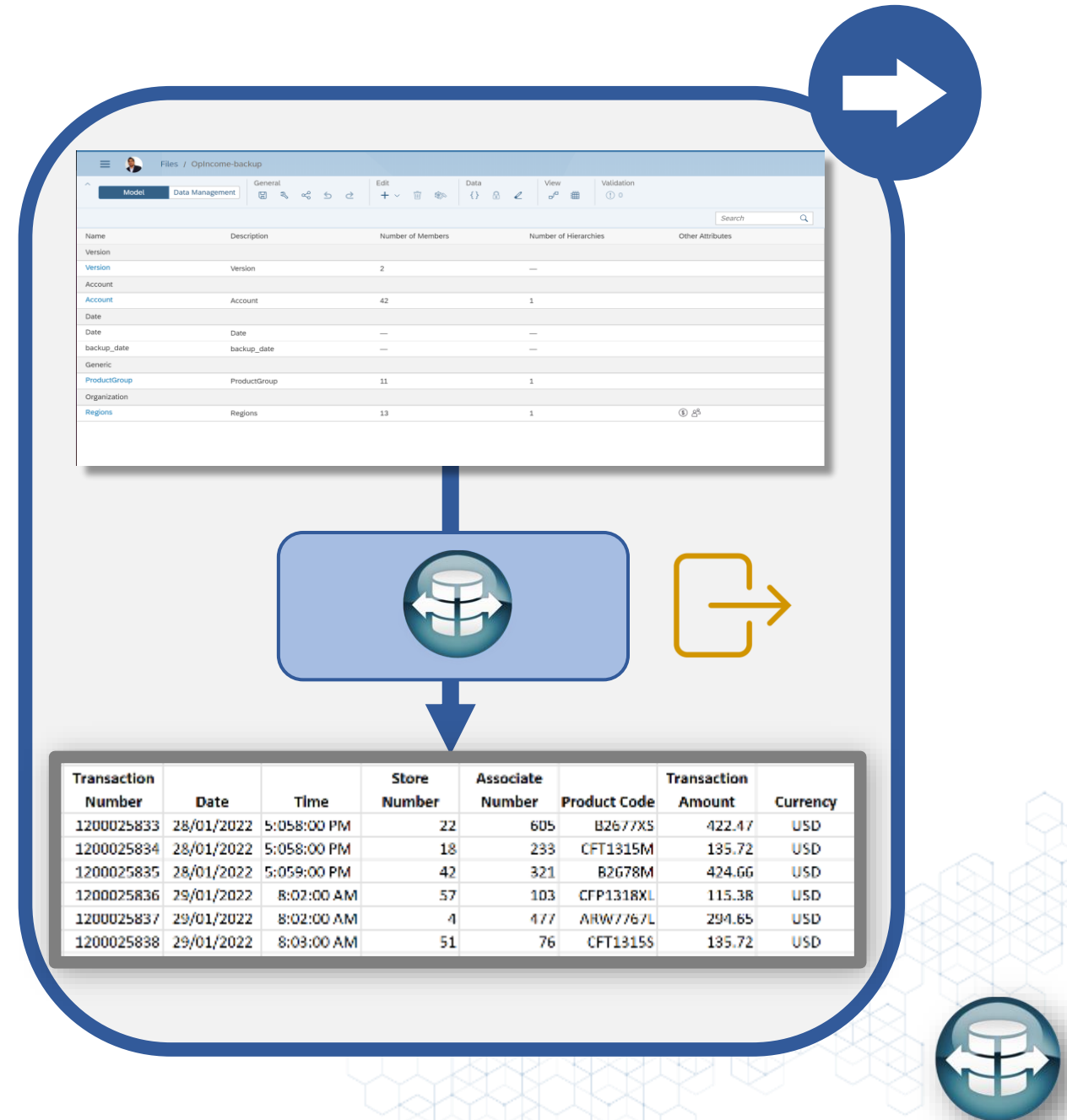
Solution Overview



Export Data Gateway

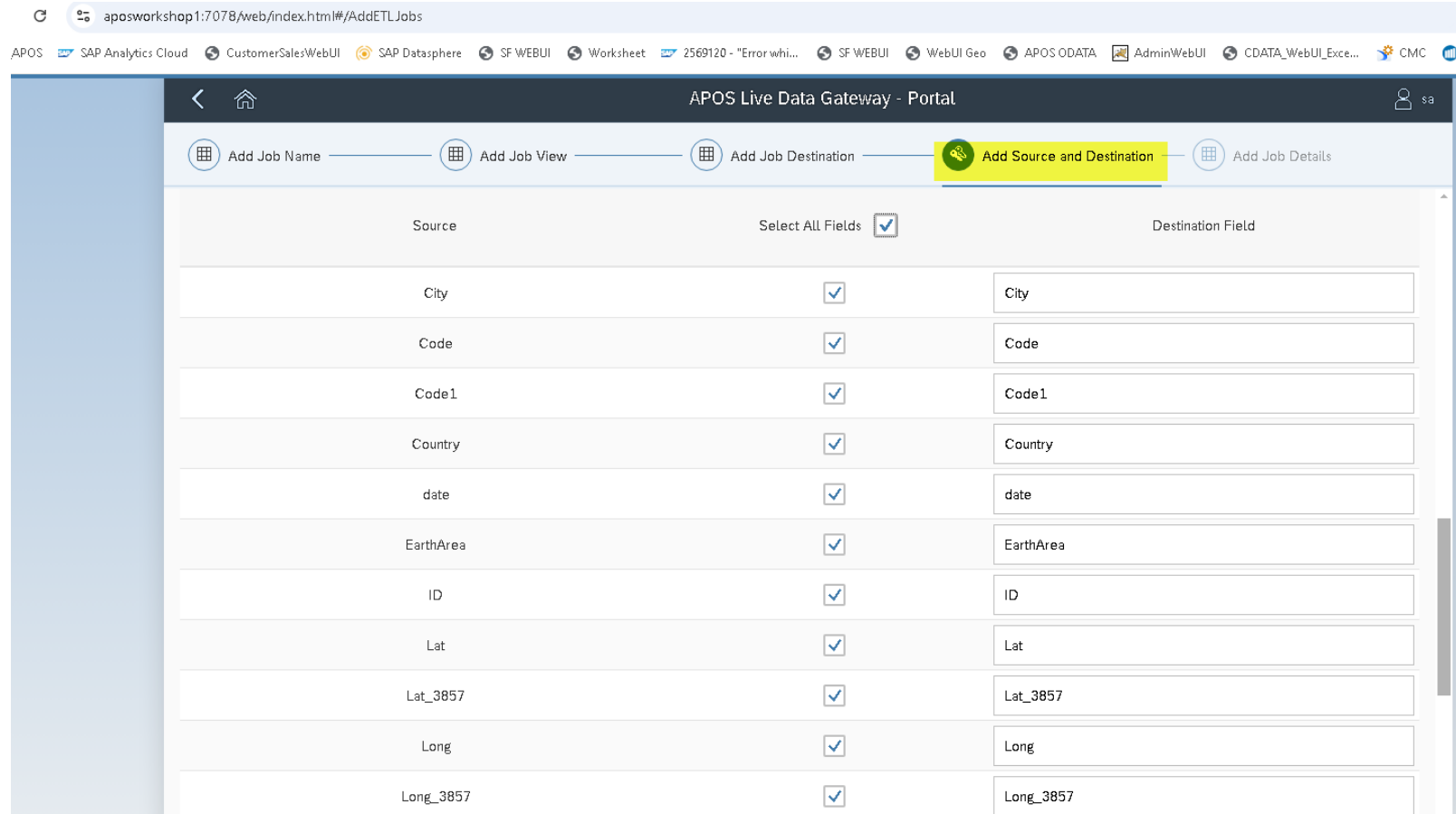
Export Data to Strategic File

- High volume data exports to CSV output
- Scheduled on recurring basis
- Automated delivery to
 - Network File shares
 - FTP
 - Email
 - Sharepoint
- On Demand data dumps



Export Data Gateway

- Export data from SAC/Database to CSV
- Schedule on recurring basis
- Select your destination – Folder, Email, FTP, SharePoint



The screenshot displays the 'APOS Live Data Gateway - Portal' web interface. The browser address bar shows 'aposworkshop1:7078/web/index.html#/AddETLJobs'. The page title is 'APOS Live Data Gateway - Portal'. The navigation bar includes 'Add Job Name', 'Add Job View', 'Add Job Destination', 'Add Source and Destination' (highlighted in yellow), and 'Add Job Details'. The main content area is a table for mapping source fields to destination fields.

Source	Select All Fields <input checked="" type="checkbox"/>	Destination Field
City	<input checked="" type="checkbox"/>	City
Code	<input checked="" type="checkbox"/>	Code
Code1	<input checked="" type="checkbox"/>	Code1
Country	<input checked="" type="checkbox"/>	Country
date	<input checked="" type="checkbox"/>	date
EarthArea	<input checked="" type="checkbox"/>	EarthArea
ID	<input checked="" type="checkbox"/>	ID
Lat	<input checked="" type="checkbox"/>	Lat
Lat_3857	<input checked="" type="checkbox"/>	Lat_3857
Long	<input checked="" type="checkbox"/>	Long
Long_3857	<input checked="" type="checkbox"/>	Long_3857

Web Based UI



Export Data Gateway – Send to Email

- Zip CSV file for compression and password protected
- Set Max attachment size
- Configure Email recipients

→ ↻ aposworkshop1:7078/web/index.htm#/AddETLJobs

WVC_APOS SAP Analytics Cloud CustomerSalesWebUI SAP DataspHERE SF WEBUI Worksheet 2569120 - "Error whi... SF WEBUI WebUI Geo APOS ODATA AdminWebUI CDATA_WebUI_Exce... CMC

APOS Live Data Gateway - Portal sa

Add Job Name — Add Job View — **Add Job Destination** — Add Source and Destination — Add Job Details

3. Add Job Destination

File Name: * Append Suffix to Name?: Append Suffix to Name?:

Zip CSV file: Zip Password?: Password:

Max Attachment Size (MB):

EMAIL DESTINATION DETAILS:


To: *

Cc:

Bcc:

Subject: *

Message: *



APOS Live Data Gateway



APOS Live Data Gateway – Unlock Live Data



APOS Live Data Gateway is a middleware platform which provides virtualized data connection and data transformation to enable live data connectivity and expanded data source options for **SAP Analytics Cloud**, with a primary focus on **non-SAP data sources**.



Leverage data from its current location



No movement or importing of data



Leverage existing data modelling



Leverage existing security models



Data is always current



Data never leaves the firewall



No added data storage requirements



Reduce data bandwidth requirements



APOS Live Data Gateway – Expand Live Options

The screenshot shows the SAP Help Portal interface. The top navigation bar includes the SAP logo, 'Help Portal (Documentation)', and links for 'Browse by Product' and 'Learning Journeys'. Below this is an 'Advanced Search' bar. The main content area is divided into a left sidebar and a main article. The sidebar contains a list of topics, with 'Using the APOS Live Data Gateway' highlighted in blue. The main article has a title 'Using the APOS Live Data Gateway' and a blue-bordered text box containing the following text: 'The APOS Live Data Gateway provides live data connectivity from SAP Analytics Cloud to an expanded set of on-premise data sources and cloud data sources. Data provided through APOS Live Data Gateway is kept safely behind the firewall, with no data replication or data upload requirements, and no need to re-create or duplicate data models or data security.' Below this, it states 'The APOS Live Data Gateway is available on the SAP App Center.' The article also has a section titled 'Data Source Types Supported' which lists 'Relational Data Sources: Microsoft SQL Server, Oracle, IBM DB2, Sybase IQ, Sybase SQL Anywhere, MySQL' and 'Data Appliances: Teradata, Netezza'.

SAP Help Portal (Documentation) Browse by Product Learning Journeys

Advanced Search

← Previous ☆ Favorite Download PDF Share Next →

Setting the Default Language for Live Data Connections

Using the 'None' Authentication Option

Using the APOS Live Data Gateway

Error: Failed to connect to system

- > Creating Import Data Connections
- > Creating Export Data Connections
- > Data Preparation and Wrangling (Datasets and Models)
- > Data Analyzer
- > Data Visualization (Stories)
- > Digital Boardroom Presentation
- > Analytic Application Design (Analytics Designer)
- > Microsoft Office Integration
- > Augmented Analytics (Smart Features)
- > Planning
- > Workflow Organization (Calendar)
- > System Administration

Using the APOS Live Data Gateway

The APOS Live Data Gateway provides live data connectivity from SAP Analytics Cloud to an expanded set of on-premise data sources and cloud data sources.

Data provided through APOS Live Data Gateway is kept safely behind the firewall, with no data replication or data upload requirements, and no need to re-create or duplicate data models or data security.

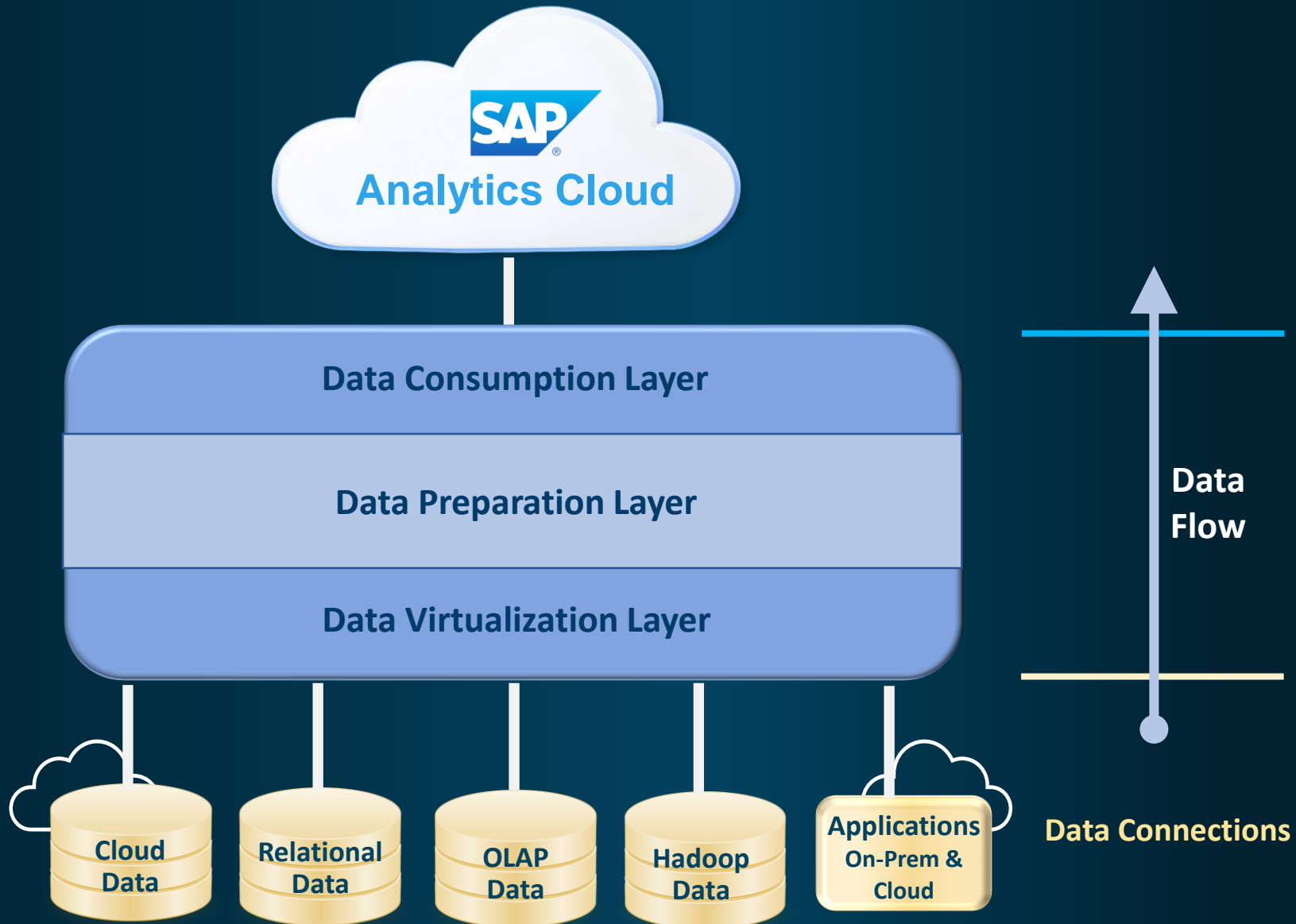
The APOS Live Data Gateway is available on the [SAP App Center](#).

Data Source Types Supported

The APOS Live Data Gateway provides live data connectivity for numerous data sources of OLAP, relational, data appliances, cloud, and legacy SAP data source types:

- Relational Data Sources: Microsoft SQL Server, Oracle, IBM DB2, Sybase IQ, Sybase SQL Anywhere, MySQL
- Data Appliances: Teradata, Netezza

APOS Live Data Gateway

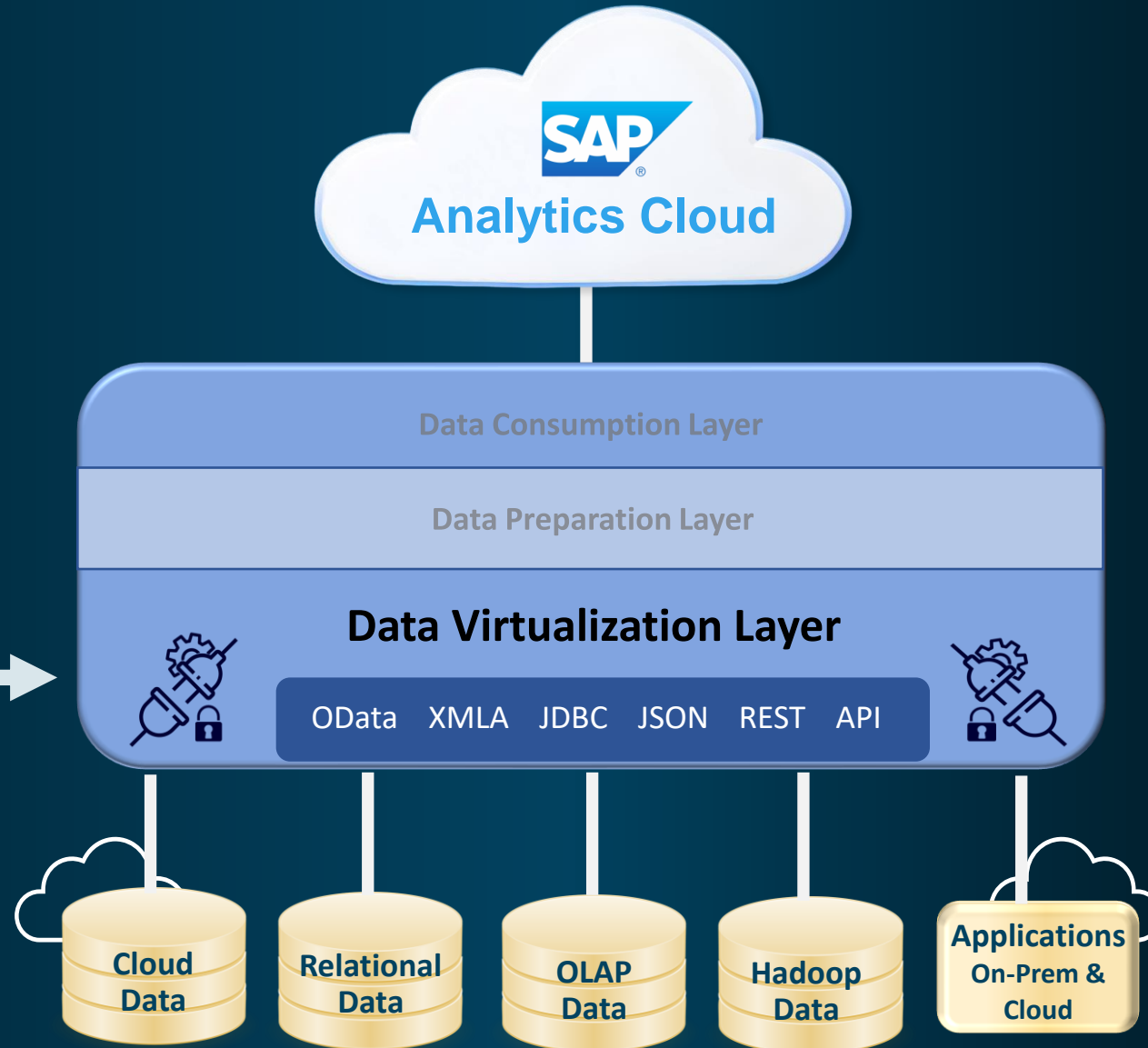


Database Virtualization Layer

Data Virtualization Layer

Key Functions

- Establish direct connectivity and communication with data source
- Communicate query requests and receive query results
- Manage database authentication and security integration, SSO
- Additional connectivity options: (Data, XMLA, JSON, REST, API, etc)

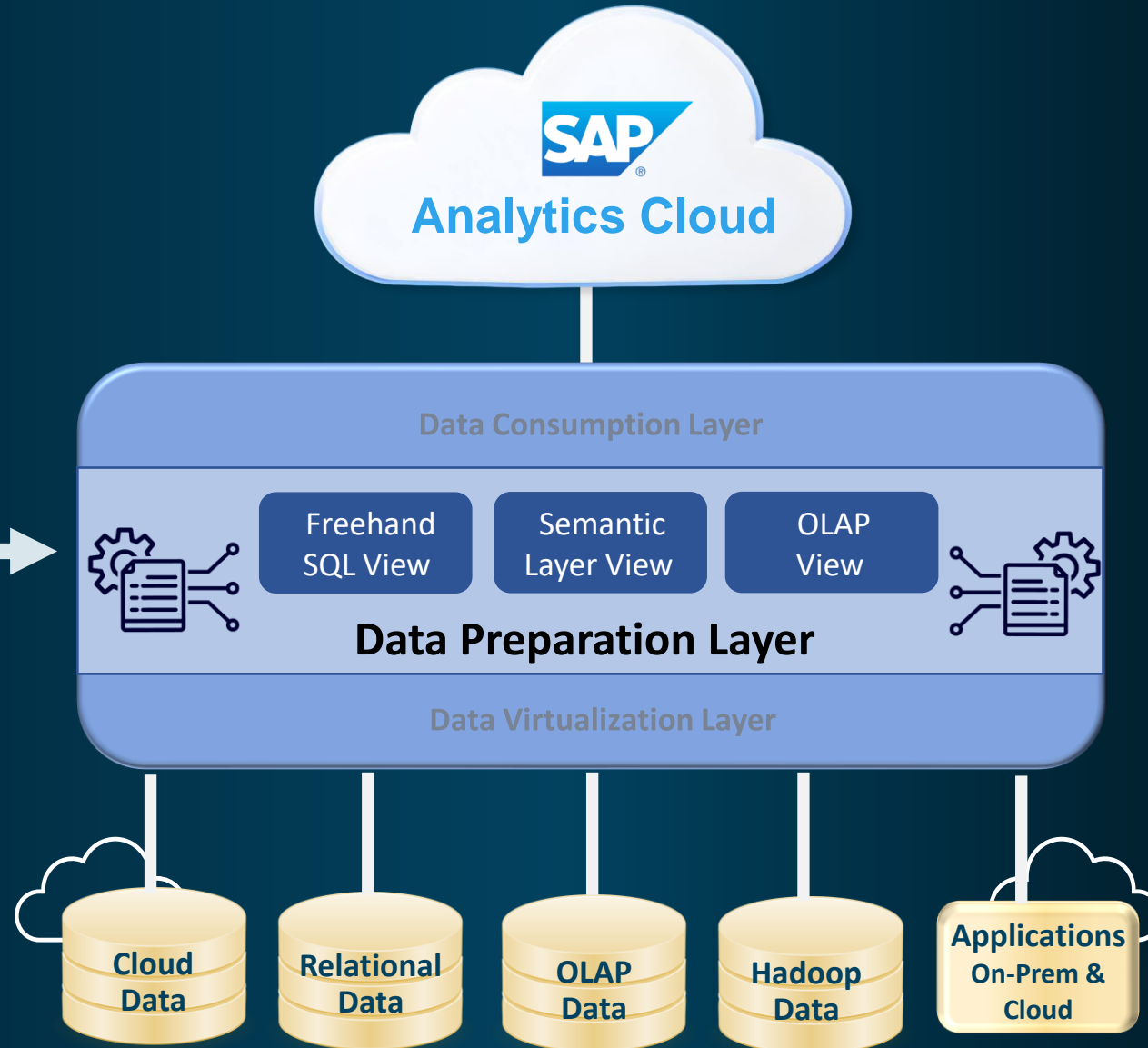


Database Preparation Layer

Data Preparation Layer

Key Functions

- Define Measures and Dimensions
- Define what data fields are exposed
- Manage table links and joins
- Set meaningful field names
- Optimize with data transformations

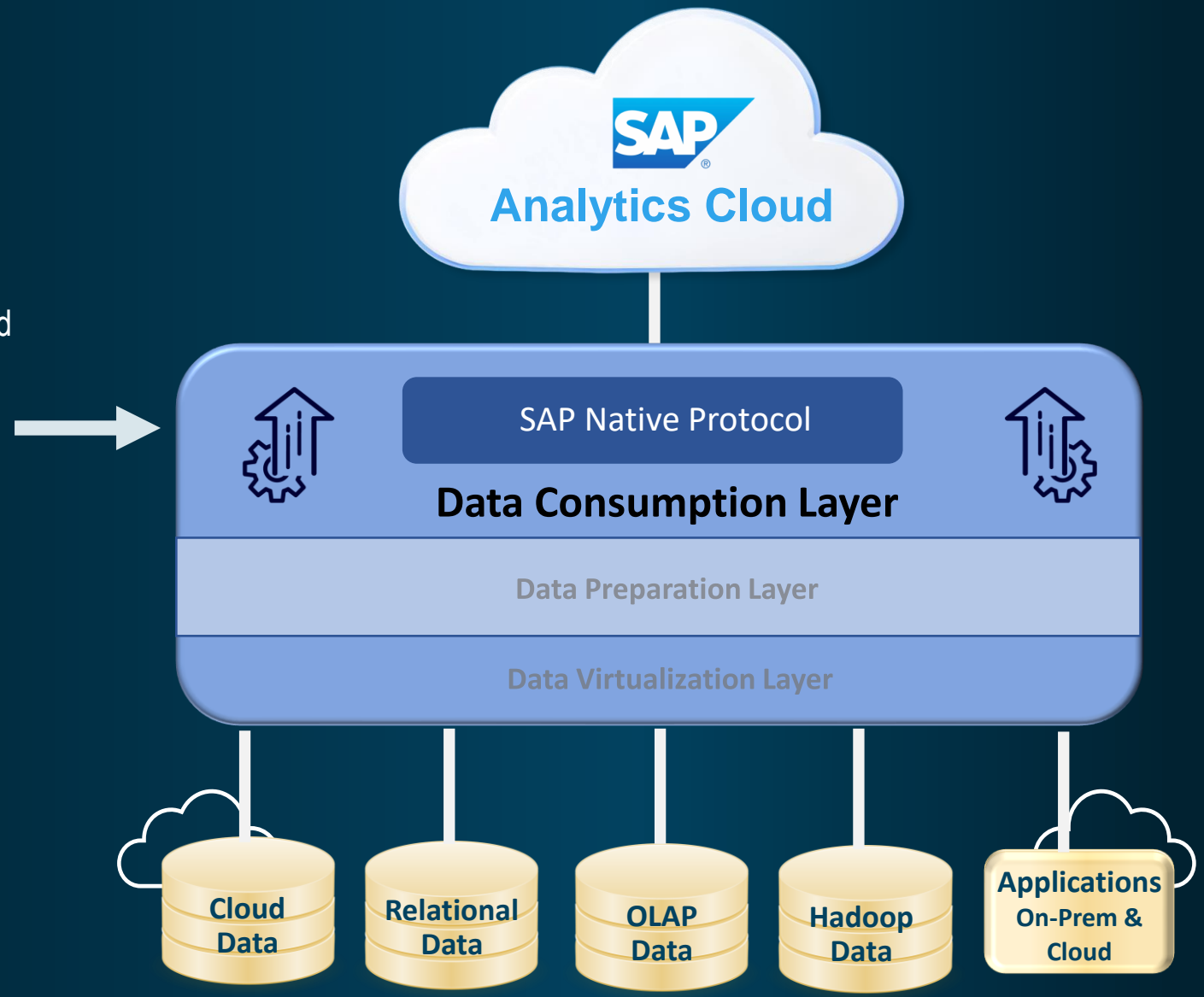


Database Consumption Layer

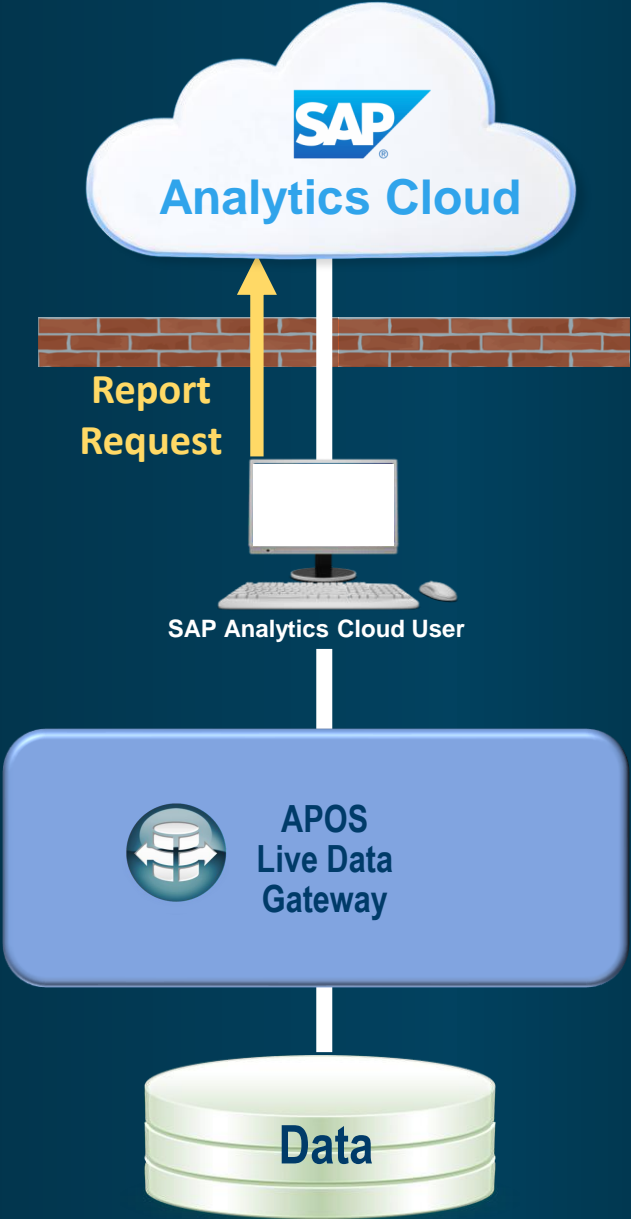
Data Consumption Layer

Key Functions

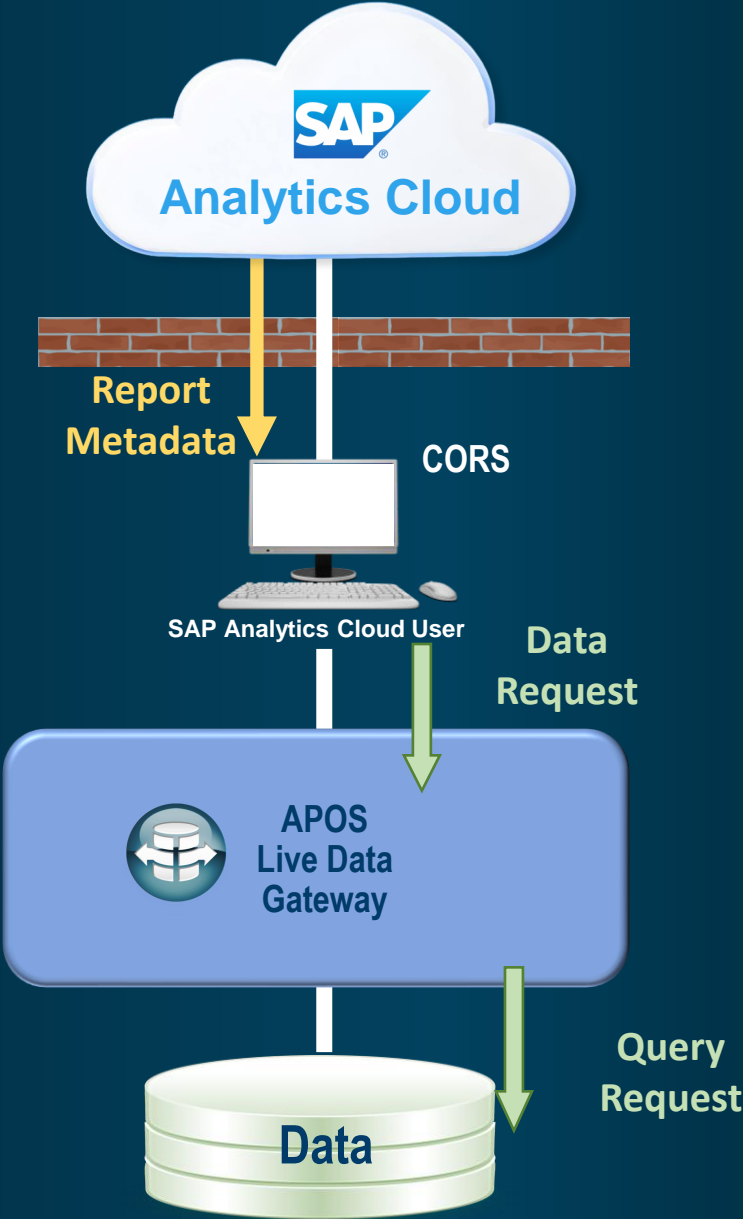
- Establish direct connectivity and communication with SAC User browser
- Supply data via SAP Native Protocol for SAC Story and SAC Application actions



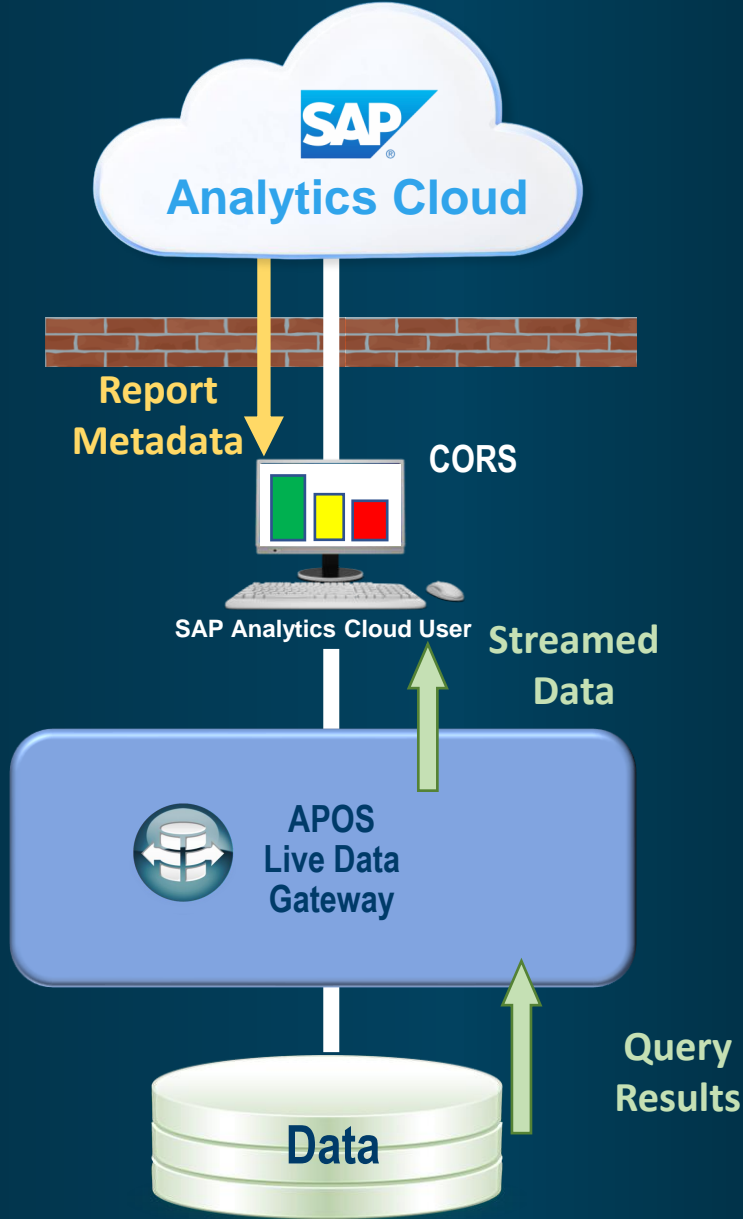
Live Data Consumption Flow



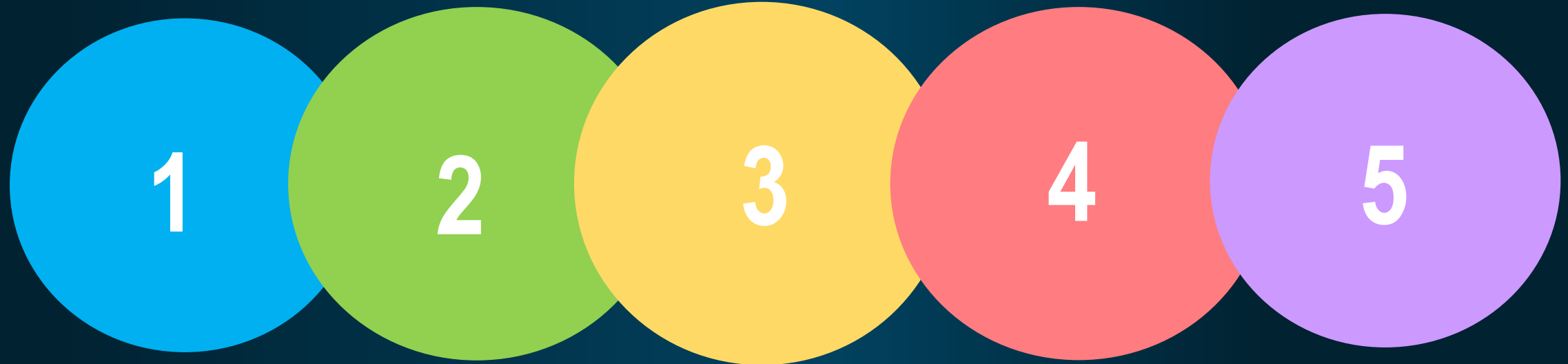
Live Data Consumption Flow



Live Data Consumption Flow



5 Simple Steps to Live Connectivity



Create Connection
from Live Data Gateway to
data source

Create View
in Live Data Gateway

Create Connection
from SAC to Live Data
Gateway

Create Model
in SAC

Create Report
in SAC

Demonstrating the 5 Steps



Create Connection from SAC to Live Data Gateway



Create Model in SAC



Create SAC Report



SAC Story Creator



SAC Consumers

Data Consumption Layer

Create View in Live Data Gateway



LDG View Builder

Data Preparation Layer

Create Connection from Live Data Gateway to data source

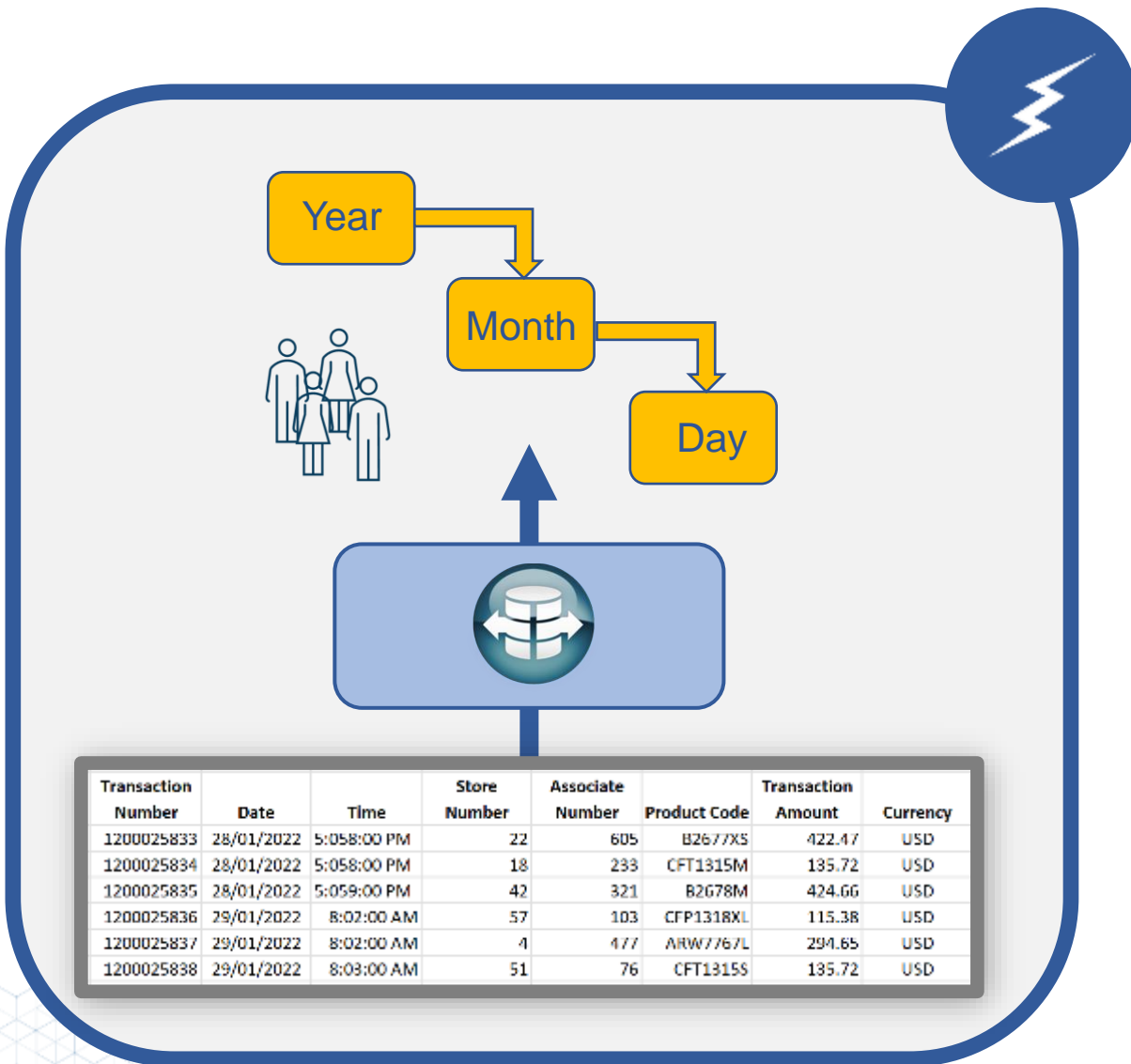


LDG Administrator

Data Virtualization Layer

Data Preparation



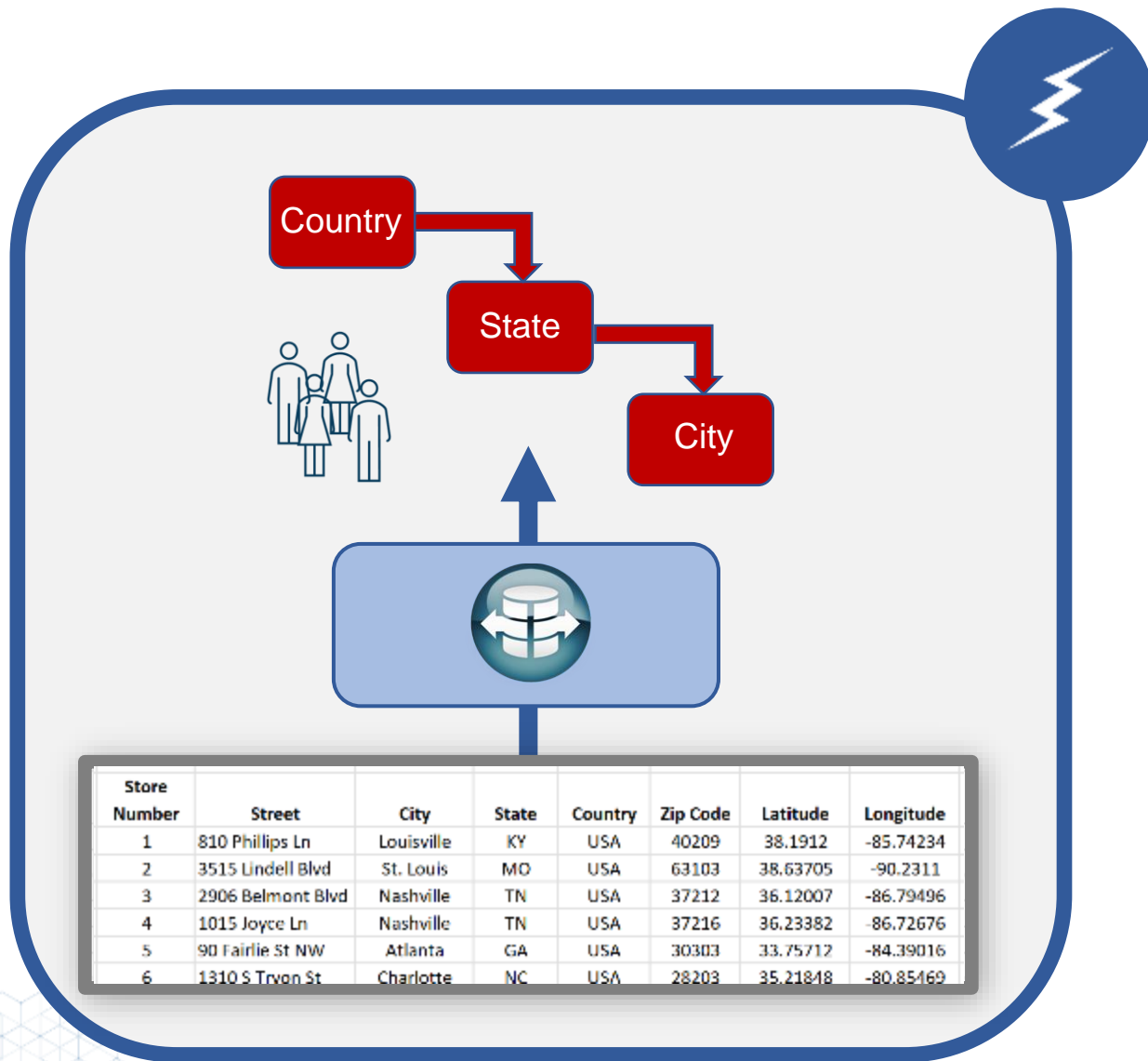


Data Transformation

Date Dimensions

- Create date hierarchies on non-hierarchical data
- Simplified user navigation and experience
- Improved analysis
- Custom date dimensions support
- Hierarchical date dimension support
 - Drill Down
 - Time Series Charts
 - Variance Charts
- Hierarchies available as individual dimensions





Data Transformation

Custom Hierarchies

- Create custom hierarchies on non-hierarchical data
- Simplified user navigation and experience
- Improved analysis
- Provide ability to create custom dimensions on non-hierarchical data
- Simplified user experience for building and consuming analytics
- Drill down functionality for non-date-based dimensions
- Level Type Hierarchies will be supported

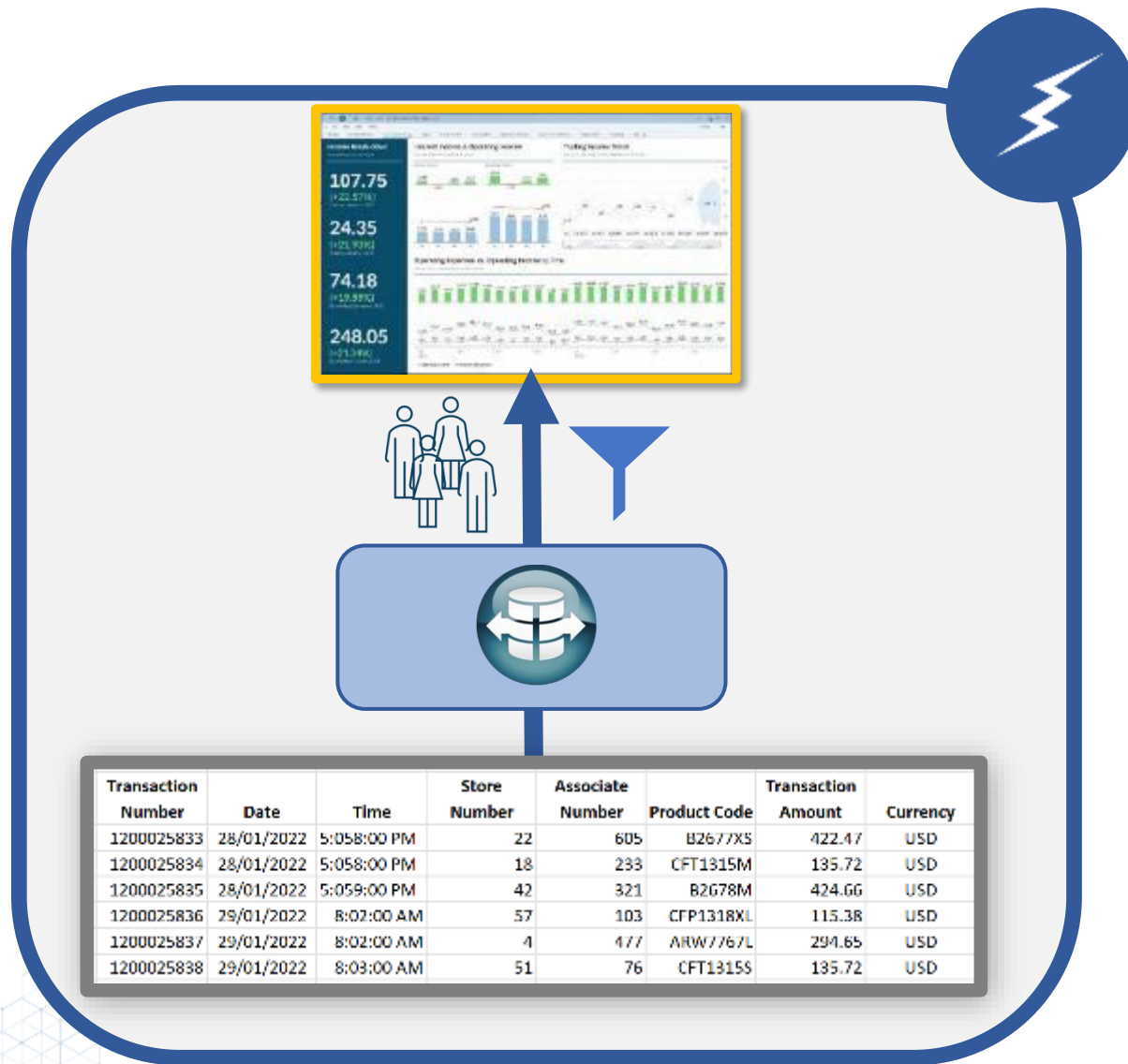


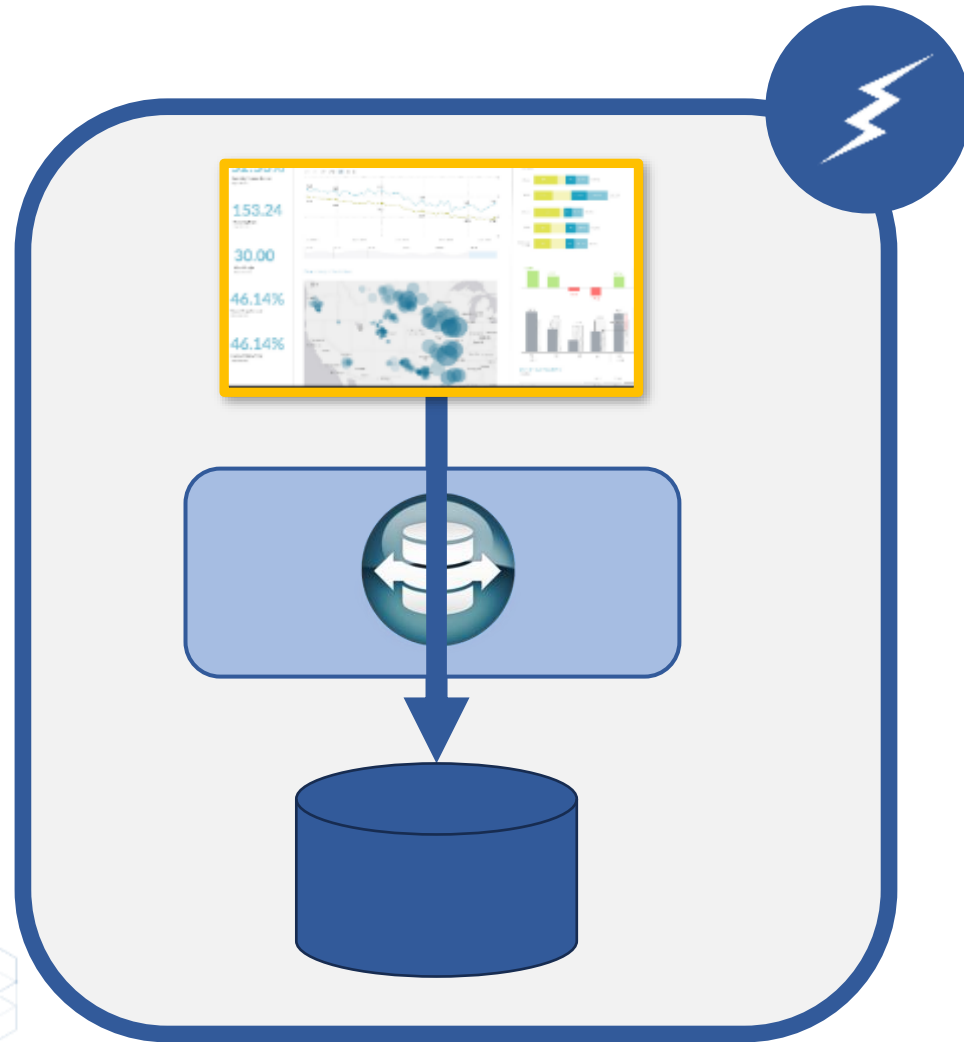
Data Transformation

Variables Support

- Powerful data filtering
- Simplified user experience
- Improved analysis

- Create custom variables
- Supported in both Client Tool and Web UI
- Utilize formulas
- Utilize full set of values or custom set of values



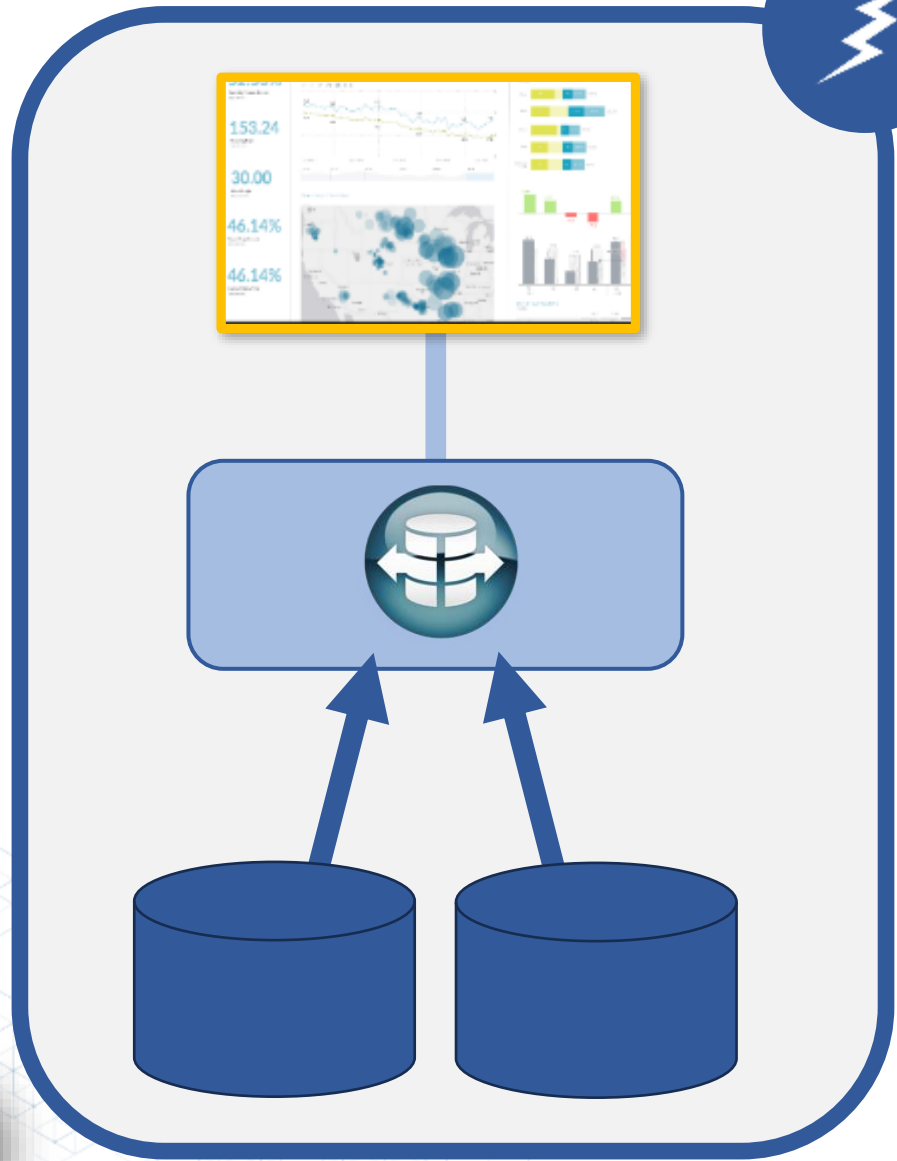


Data Transformation

Database Passthrough

- Optional database passthrough rather than building APOS semantic layer views
- Direct access to database tables or views
- Automated defining of measures & dimensions
- Removes need for duplicate modelling when already exists
- Access full database catalogue

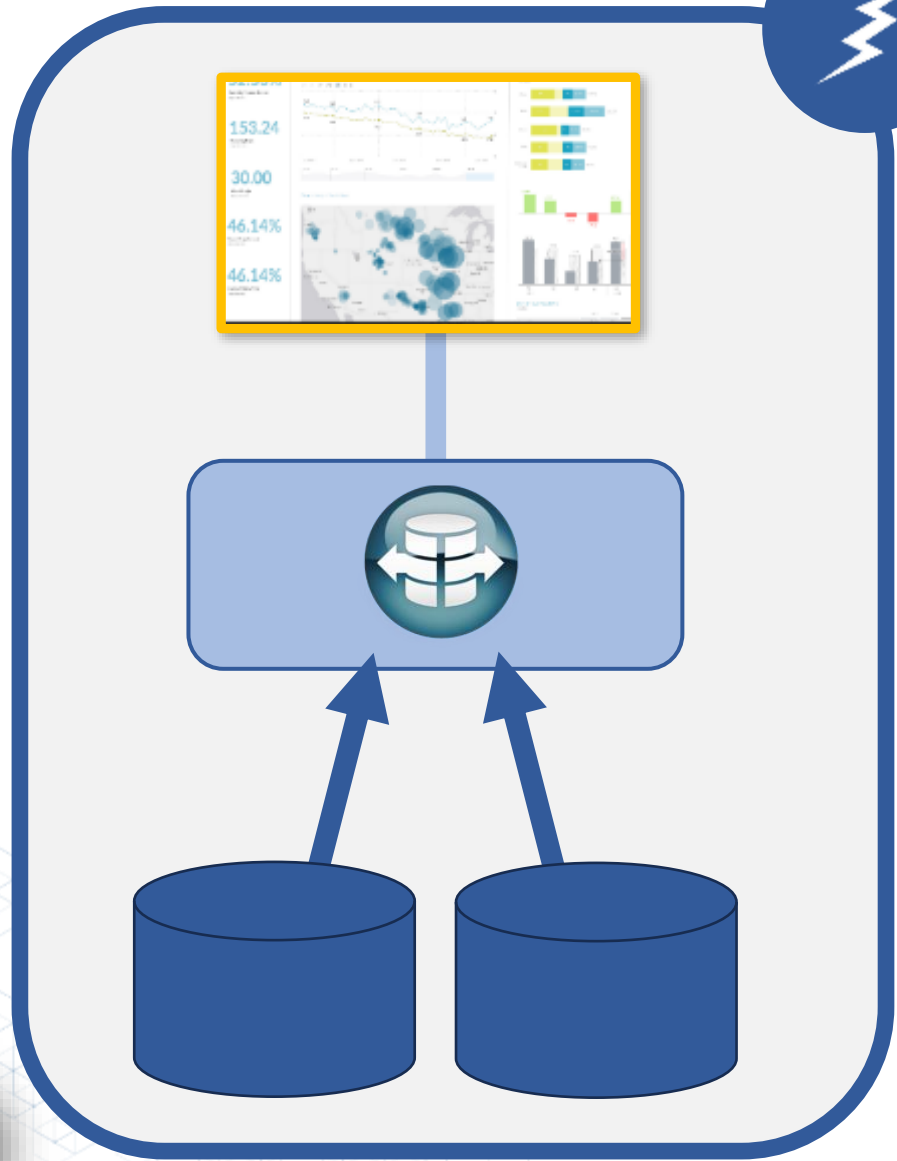




Data Transformation

Data Blending

- Combine data from two different data sources and present as one source to SAC
- APOS View unifies data from two sources in live mode
- Consolidate virtualized connections



Data Transformation

Data Blending

- Leverage data from multiple sources into individual analytics
- Extract business value from multiple data sets
- Reduce data movement

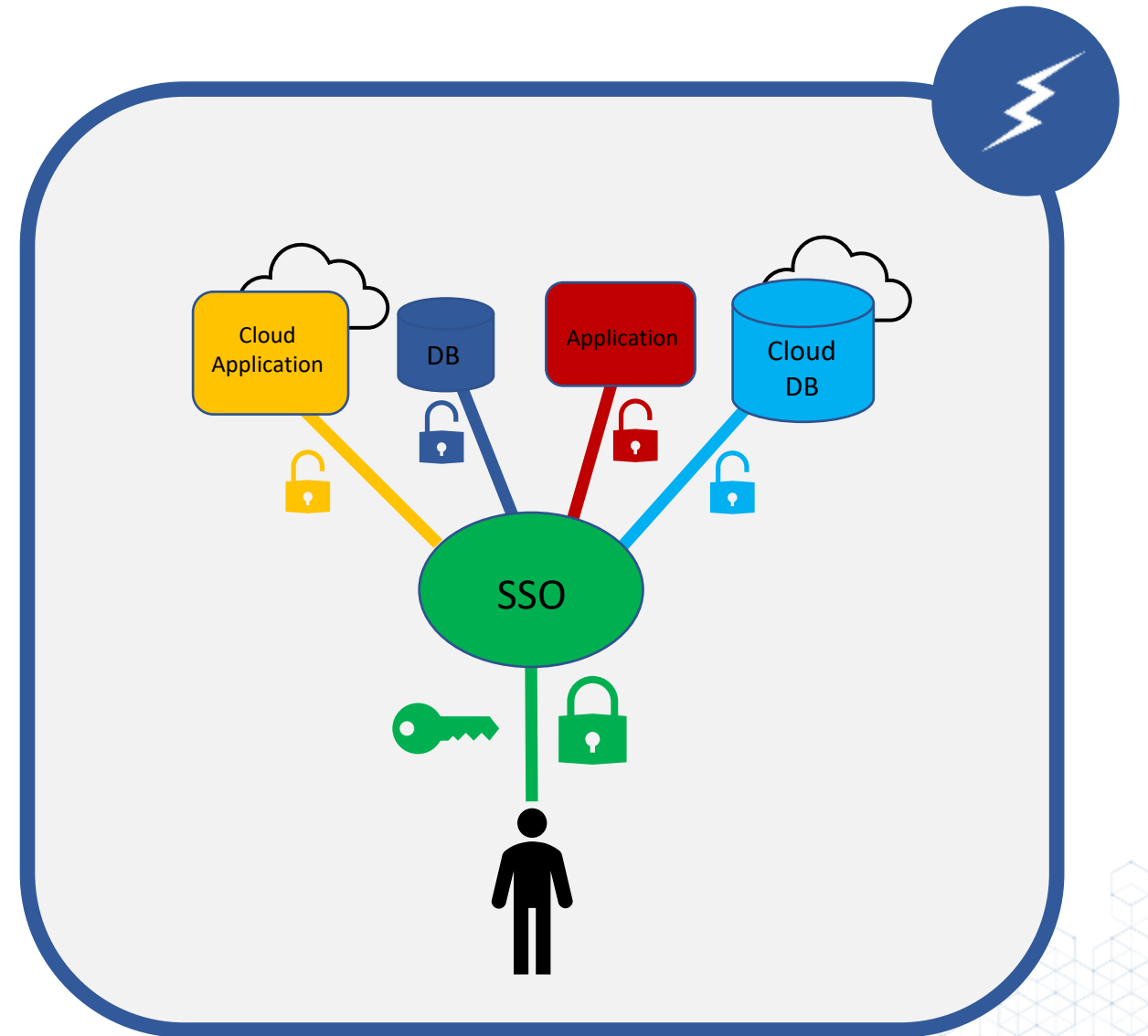
Security



APOS Live Data Gateway – Security

Single Sign On

- Unified security authentication
- Integrated to enforce data base security
- Simplified user experience
- Various SSO options supported
- SSO Technologies we work with:
 - SAML
 - Azure AD
 - OKTA
 - Google Cloud IDP
 - OAuth
 - Kerberos with WinAD
 - Keypair Authentication
 - User Impersonation
 - Pre-Defined Cached User

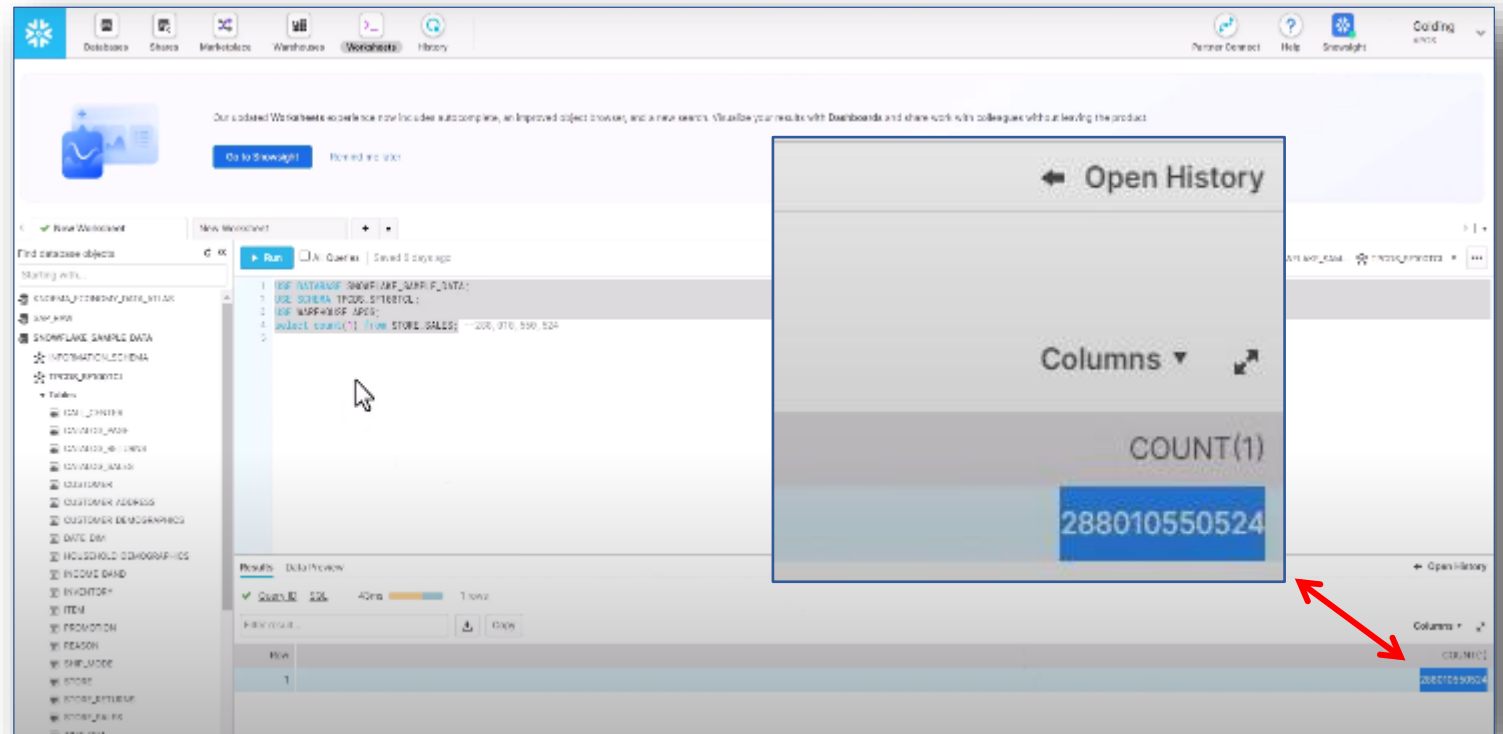


Performance



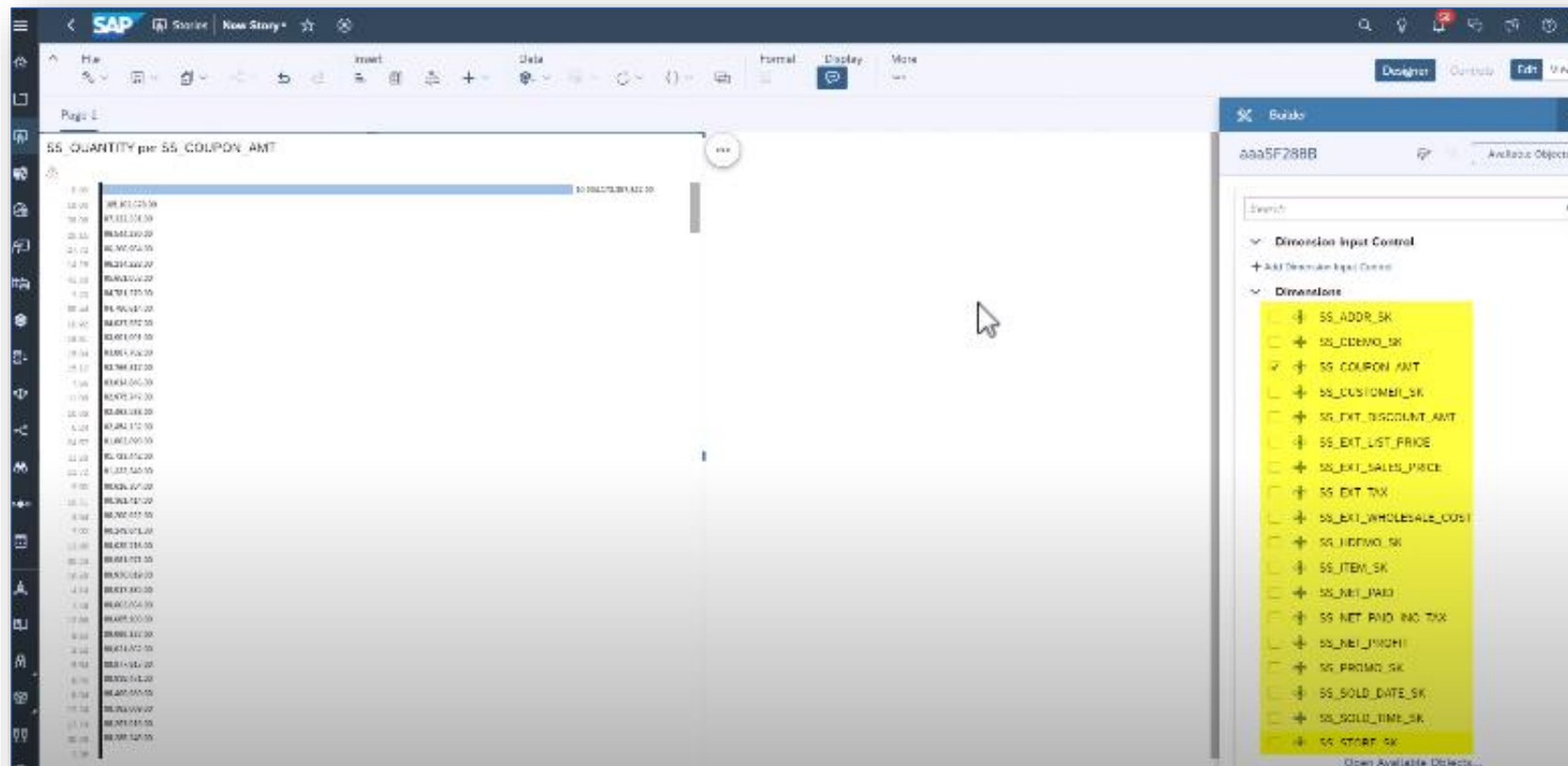
Performance Considerations

- No data being stored
- Data being read from source database
- No caching of data
- New queries initiated with each data request within SAC



APOS Live Data Gateway – Performance Results

- 288 billion row data set
- 10.5 Terabytes
- On-the-fly aggregated queries
- Sub-2 second response time!



Solution Overview



APOS Data Gateway – Session Summary

- APOS Import Data Gateway
 - Expanded and simplified Import connectivity for SAC
 - Extract and export SAC Planning data
 - Strategic and bi-directional data movement
- APOS Export Data Gateway
 - Export and distribution of target data sets on schedule
- APOS Live Data Gateway
 - Direct Live connection options for SAC
 - Data Transformation, Security, High-performance

APOS Data Gateway – Next Steps

- APOS Data Gateway Resources
 - Webinar Follow up email
 - APOS Website www.apos.com
- Solution Demonstration
 - APOS Team member provides personalized presentation for you and your colleagues
 - Consider solution evaluation

APOS Solutions for SAP Analytics Cloud



APOS Publisher for Cloud

- Automated broadcasting and distribution of personalized SAC reports to target user groups
- Distribute reports to the right people, right time, right location, right format
- Analysis for Office broadcasting and scheduling



APOS Data Gateway

- Live connectivity from SAC to wide range of data sources
- Import data from wide range of sources into SAC
- Extract and Export data from SAC

APOS Solutions for SAP BusinessObjects



APOS Insight

BI System Auditing

- System Inventory
- Security Analysis
- System Usage Analysis
- Report Impact Analysis

BI Report Testing

- Automated Report Testing
- Regression Testing
- Validation of Report Data
- Report Performance Testing

BI System Monitoring

- Advanced System Monitoring
- Operating Environment Monitoring
- Database Monitoring
- Process Monitoring

BI Query Surveillance

- Real-time BI Query Monitoring
- Query Performance Alerting & Auditing
- Query Intervention; Remote Cancelling
- Sensitive Data Audit



APOS Administrator

Object Management

- Bulk Security Management
- Bulk Settings Management
- System Objects Promotion
- Connections Maintenance

Schedule Management

- High-volume schedule management
- Multiple schedule properties editing
- Grid scheduling interface
- Repeatable scheduling templates

Instance Management

- Manage entire instance inventory
- Granular instance search
- Stop, pause, release, reschedule
- Rapid recovery to failed schedules

APOS Storage Center



- System Backup
- Content Archiving
- Content Versioning
- Selective Restoration
- Automated System Clean Up

APOS Publisher



- Systematic Content Delivery
- Advanced Document Bursting
- Enhanced Content Distribution
- Security and Encryption
- Statement Generation

APOS Web Intelligence Migrator



- Bulk conversion of Universes from UNV to UNX
- High-Volume Repoint Web Intelligence reports
- Success validation
- Controlled, project-based workflow

STAY CONNECTED



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Thank you!

Get in touch

WEBSITE

www.apos.com

EMAIL ADDRESS

info@apos.com

PHONE NUMBER

(+1) 519 894 2767

