



SAS Data Management Update / Information Catalog

Günter Greulich, Sr Solutions Architect

17.September 2020

Plattform Netzwerktreffen | Online Live Session (via WebEx)



Better Together

Data Management

Analytics

*"I didn't win without
SAS Data Management,
and that's why I consider
him my best teammate
of all time.*

*He helped me so much in
the way I approached
the game, in the way I
played the game.*

*Whenever they speak
SAS Analytics, they
should speak*

SAS Data Management."



SAS Data Management on SAS 9.4

Product Themes

1

Cloud Connectivity Enabled

Access data in any format and any location

2

Updated & Secured

SAS 9.4 products are Flash free and stable

3

Streamlined

Data Management portfolio is rationalized and simplified

Now

As part of SAS 9.4M7 – 20W34

- SAS/ACCESS Interface to DB2 – Support for IBM Integrated Analytics Server (IIAS)
- SAS/ACCESS Interface to BigQuery – Bulk Unload
- SAS/ACCESS Interface MongoDB – GA
- SAS/ACCESS Interface to MSSQL – Support for Microsoft Azure Synapse
- SAS/ACCESS Interface to PostgreSQL – Support for EnterpriseDB
- SAS/ACCESS Interface to Salesforce – GA + Support for Proxy
- SAS/ACCESS Interface to Spark – GA & LAX only
- SAS/ACCESS Interface to Yellowbrick – GA
- SAS In-Database Technologies for Aster, DB2, Greenplum, Netezza, Oracle, SAP Hana, Teradata - Updates
- SAS In-Database Technologies for Spark – GA (CDH 6.x, HDP 3.x, MapR 6.x, AWS EMR 5.x)
- SAS In-Database Technologies for Hadoop – Updates

As part of SAS 9.4M7 – 20W47

- SAS/ACCESS Interface to BigQuery – BigQuery Storage API (Hotfix)
- SAS/ACCESS Interface Hadoop – Support for CDP 7.1 (in-cloud and on-premises)
- SAS/ACCESS Interface to Netezza – Add Support for IBM Performance Server for PostgreSQL
- SAS/ACCESS Interface to Snowflake – Support Bulk Load on Microsoft Azure (ADLS)
- SAS In-Database Technologies for Spark – Support for CDP 7.1 (in-cloud and on-premises)

Future

21WXX or HotFixes

- SAS/ACCESS Interface to DB2 – Support for external table loading technique
 - SAS/ACCESS Interface to PostgreSQL – Support for CockroachDB
 - SAS/ACCESS Interface to Salesforce – Support for Updates, Inserts
 - SAS/ACCESS Interface to Snowflake – Support for bulk load/unload on GCP Storage
 - SAS/ACCESS Interface to Spark – Support for Google DataProc
 - SAS In-Database Technologies for Aster, DB2, Netezza, Oracle - Updates
 - SAS In-Database Technologies for Spark – CDH 6.x, HDP 3.x, MapR 6.x, AWS EMR 5.x, CDP 7.X
 - SAS In-Database Technologies for Hadoop – Updates
-
- SAS QKB Definition Editor

SAS Data Management on SAS Viya

Product Themes

1

Together with Analytics

Streamline data preparation & integration, and analytics transparency

2

Together with the Cloud

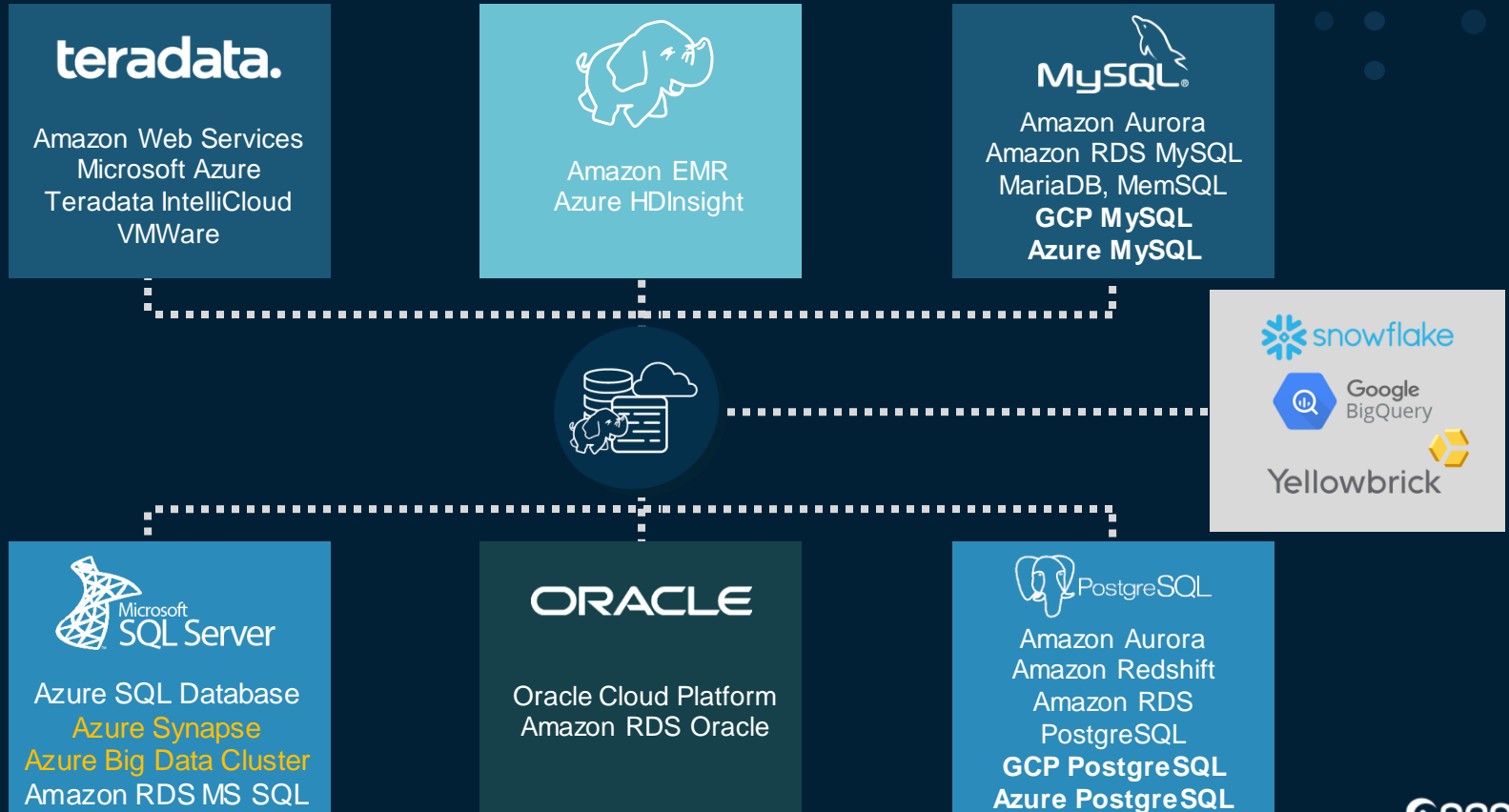
Access data in any format and any location

3

Together with Automation

Scale and Democratize Data Management with AI

Together with the Cloud



Released

SAS/ACCESS Interfaces to

- BigQuery
- MongoDB
- Salesforce
- Snowflake

SAS Viya 3.5

- SAS Data Preparation
- SAS Data Quality

SAS Viya 3.5

Now

SAS/ACCESS Interfaces to

- DB2
- BigQuery
- MongoDB
- MSSQL
- PostgreSQL
- Spark

2020.0.7

- BigQuery
- Hadoop
- Netezza
- Snowflake
- Yellowbrick

2020.1.1

SAS In-Database Technologies for

- Hadoop
- Spark
- Teradata

2020.0.7 - 2020.1.1

- SAS Studio “Flow”
- SAS Data Preparation
- SAS Data Quality
- SAS QKB CI 32

2020.0.7

Next

SAS/ACCESS Interfaces to

- MongoDB
- BigQuery
- PostgreSQL
- Salesforce
- Snowflake
- Spark

2020.1.1

- SAS Studio “Flow”
- SAS Information Catalog

2020.1.1

SAS In-Database Technologies for

- Spark

2020.1.4

- SAS Data Enrichment
- SAS Data Quality

2021.1.2

Future

SAS/ACCESS Interfaces to

- DB2
- MongoDB (CosmoDB)
- REST
- Snowflake
- Spark

2020.1.4

- SAS Studio “Flow”
- SAS Information Catalog

2020.1.4

- SAS Studio “Flow”
- SAS Information Catalog
- SAS Data Quality
- SAS In-Database Technologies for Spark
- SAS In-Database Technologies for MSSQL

2021.1.2

- “Business Glossaries” on SAS Viya

2021.2.2



Together with Analytics

SAS Studio - Unified Flow Designer on SAS Viya 4

The screenshot displays the SAS Studio - Develop SAS Code interface. The top menu bar includes 'New', 'Options', 'View', 'Open', and 'Save All'. The left sidebar shows a 'Tasks' panel with a search bar and a list of tasks: 'SAS Tasks' and 'My Tasks'. Under 'SAS Tasks', there are categories like 'Flow Tasks' (File, Import, Query, SAS Program, Table), 'Prepare Data', 'SAS Viya Cloud Analytic S...', 'SAS Viya Econometrics', 'SAS Viya Evaluate and Im...', 'SAS Viya Forecasting', 'SAS Viya Machine Learning', 'SAS Viya Optimization an...', 'SAS Viya Prepare and Expl...', 'SAS Viya Statistics', and 'SAS Viya Text Analytics'.

The main workspace shows a flow diagram with the following components and connections:

- Two input nodes: 'beers' and 'breweries' (both represented by purple grid icons).
- Two 'Import' nodes (blue square icons with a white 'I') connected to 'beers' and 'breweries' respectively.
- A 'Query' node (blue square icon with a white 'Q') receiving input from both 'Import' nodes.
- A 'Table' node (black circle icon with a white grid) connected to the 'Query' node.
- A 'SAS Program' node (orange square icon with a white 'S') connected to the 'Query' node.

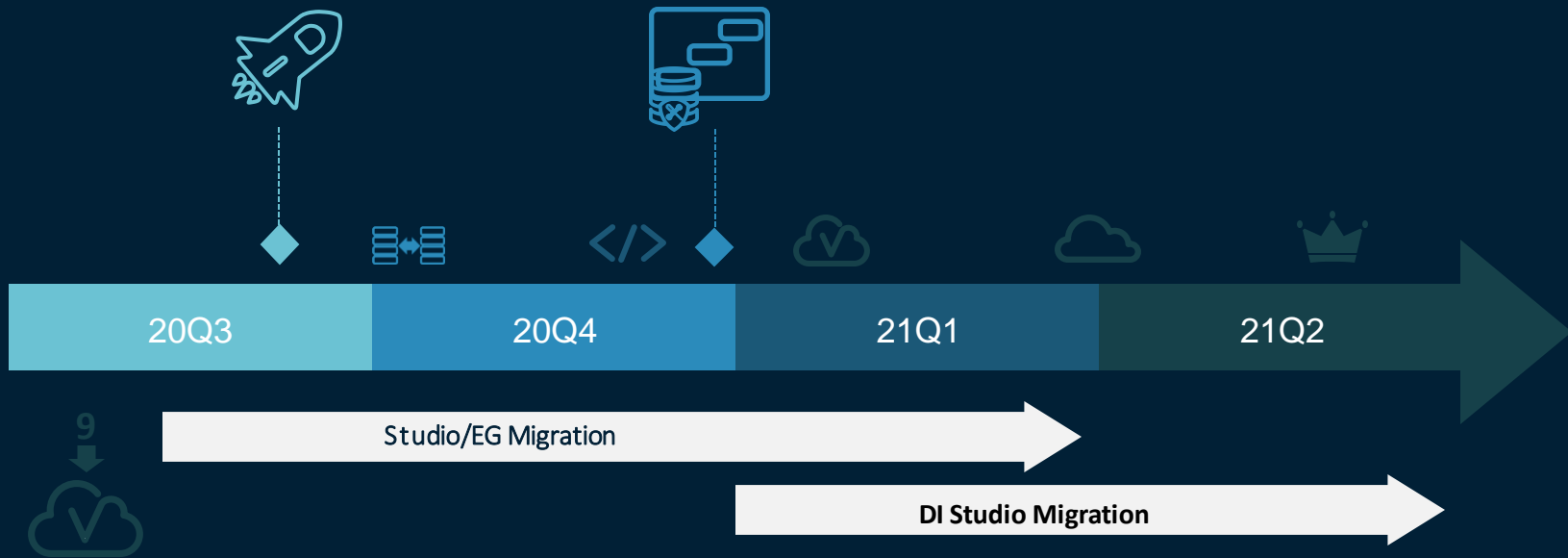
Below the flow diagram, the 'SAS Program' node is expanded, showing the following SAS code:

```
1 proc freq data=&input1;  
2 tables beer_name;  
3 where state = "ND";
```

SAS Studio - Prioritized Themes

- 1 Standard usability features (Status indicators, Run/Stop, Step by Step execution)
- 2 Custom Transformations
- 3 Data Movements (Insert/Delete/Update, Union, Distinct)
- 4 Enterprise Guide Projects Migration
- 5 Read/Write files from/to Azure ADLS

High Level Plan (Proposed)

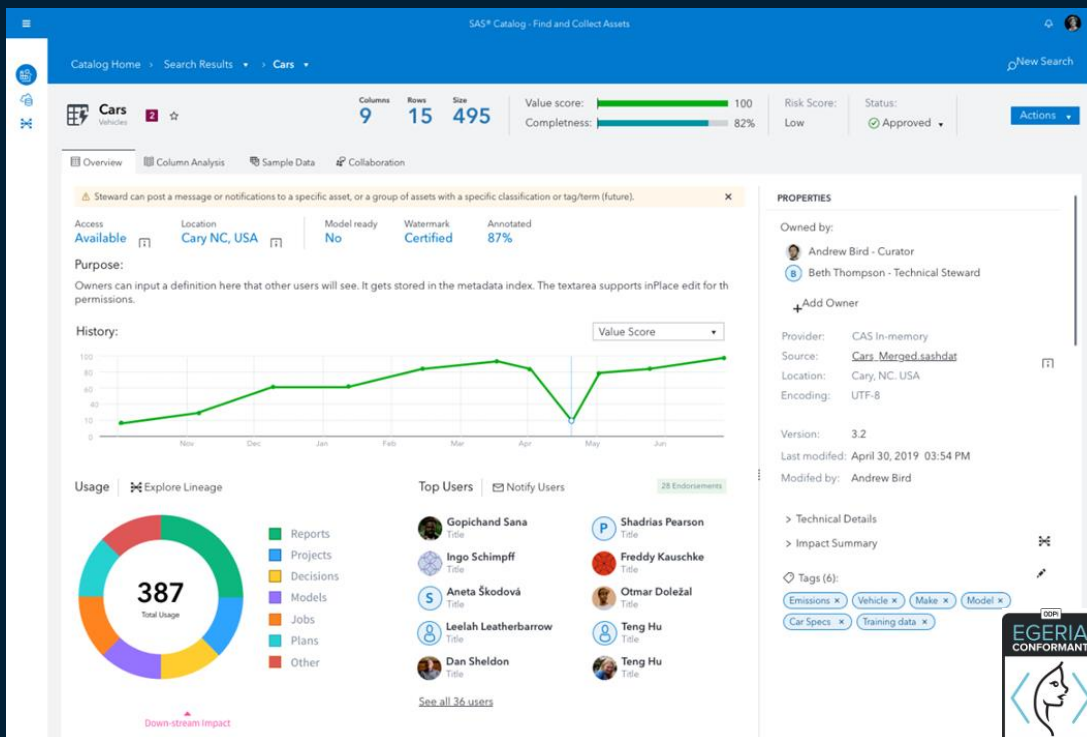


Information is subject to change

An intuitive self-service Data Catalog portal to Analytics and Data Management.

Together with Automation

A new perspective on your metadata



SAS Information Catalog Project Goals



Deliver foundational metadata services for SAS Viya



Support SAS Customers needs in terms of Data Cataloging & Metadata Management



Provide populators to crawl, index, classify, and profile content



Provide intelligent, fast, ranked, natural language search

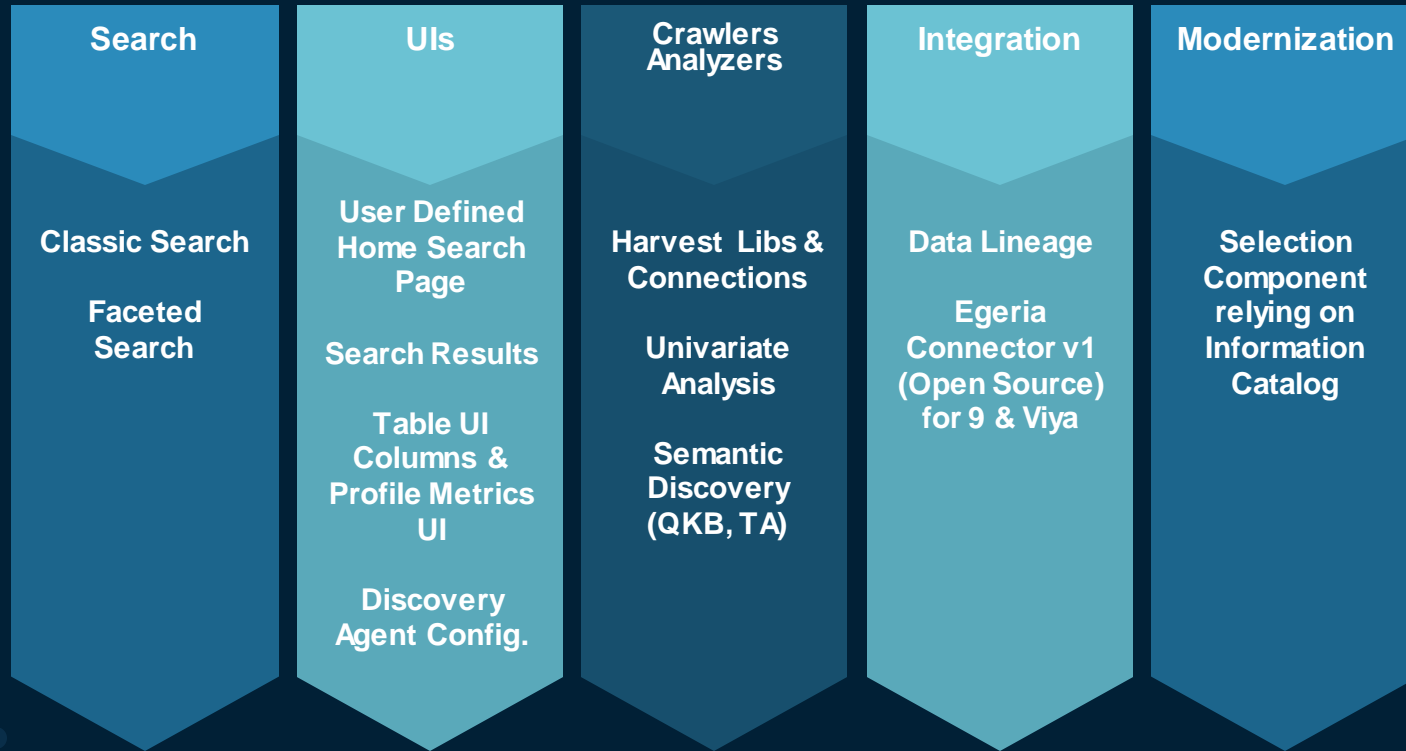


Support federation of metadata with external systems



Support an upgrade path for metadata from SAS 9 to Viya

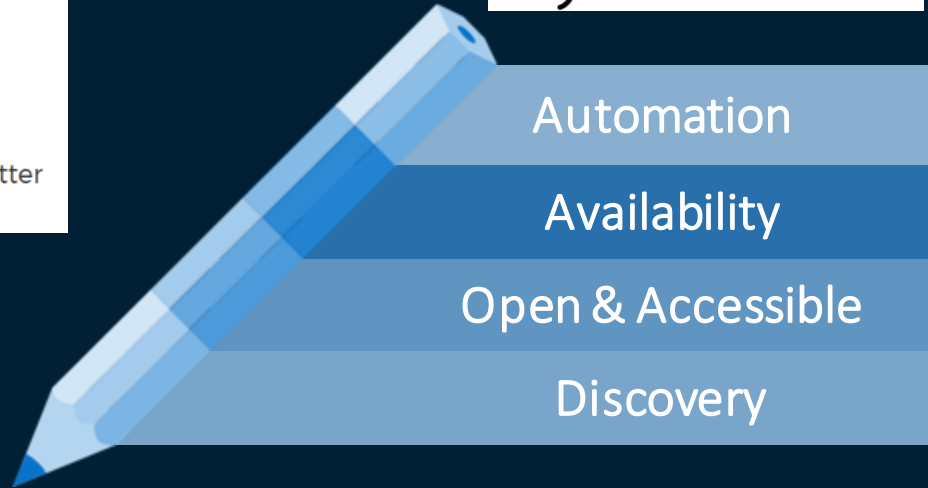
SAS Information Catalog - Scope



Looking Ahead

ODPi Announces Egeria for Open Sharing, Exchange and Governance of Metadata

Industry's First Open Metadata Standard Helps Organizations Better Understand, Manage and Gain Value from Data



"Egeria and its open approach to metadata management and integration only underscores further the need for metadata standards to promote responsible data exchange across varied technology environments."

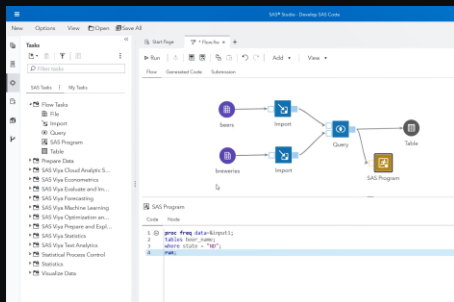


Coming 2020-2021

Together with Analytics

SAS Studio

- New unified flow designer on SAS Viya
- Role based driven user interface and transformations
- SAS Data Integration functions embedded in new SAS web-based data flow designer
- Multi-language code generation angle
- AI Driven Optimization Code/Execution location features



Together with the Cloud

SAS Connectivity

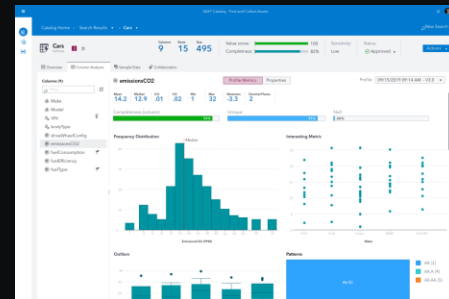
- Machine Learning Driven Data Quality functions
- Faster implementation of identification definitions
- Provides a solution for customers who have proprietary data types
- Faster introduction of support for new domains



Together with Automation

SAS Information Catalog

- Augmented repository including information on entities, attributes, relationships, and domains.
- Discover, classify and document how data fits together as well as provide a common vocabulary around data.
- Integrated with Data Profiling, personal data identification
- Open Metadata Integration through ODPI Egeria





Fragen ??

sas.com





Vielen Dank !