

SAS und Microsoft Partnerschaft



Kombinierte Fähigkeiten von SAS und Microsoft

CHALLENGE



Zugriff, Integration und Anreicherung von Daten aus verschiedenen Quellen mit **SAS & Microsoft Synapse**.



Erstellen Sie Analytics-Pipelines mit SAS, ML und Open-Source-Sprachen mit integrierter Automatisierung & Erklärung.



Demokratisierung und Einbettung von Erkenntnissen in die gesamte **Microsoft Teams und Power-Plattform**.

DECISION



SAS Viya on Microsoft Azure

SAS im Azure Marketplace

Übersicht

SAS Viya on Microsoft Azure

- Marketplace-Angebot von SAS in Microsoft Azure
- Pay-as-you-go-Abonnement, verfügbar über den Azure-Marktplatz
- Automatisierte Bereitstellung im eigenen Azure-Tenant
- Umfasst SAS Visual Machine Learning
- Kommt mit Python-Integration und Jupyter Notebooks

DATA SCIENCE OFFERINGS

Capability Comparison

More than just powerful algorithms, our data science offerings include critical data preparation, data visualization and model management capabilities. Choose the offering that meets your requirements today with the knowledge that you have a path to the future in a single, expandable environment.

Capabilities	SAS Visual Machine Learning	SAS Visual Data Science	SAS Data Science Programming*	SAS Visual Data Science Decisioning
Data access: data preparation, data quality & information cataloging	✓	✓	✓	✓
Advanced flow steps & information governance	✓	✓		✓
Visualization & reporting	✓	✓	✓	✓
Conversational AI & chatbots	✓	✓	✓	✓
Statistics	✓	✓	✓	✓
Matrix programming		✓	✓	✓
Machine learning & deep learning	✓	✓	✓	✓
Model deployment & management	✓	✓		✓
Forecasting	▲	✓	✓	✓
Text analytics	▲	✓	✓	✓
Optimization	▲	✓	✓	✓
Econometrics	▲	✓	✓	✓
Digital decisioning	▲	▲	▲	✓
Event streaming analytics	▲	▲	▲	✓
Advanced workload management	▲	▲	▲	▲

* Programmatic interface only; no visual interface.
▲ Optional.



Microsoft Azure Marketplace

SAS® Viya® on Azure by SAS Institute Inc.

Create SAS® Viya® on Azure

Basics **Review + create**

PRODUCT DETAILS

SAS® Viya® on Azure by SAS Institute Inc.

Plan **Metered Internal Only**

With SAS Visual Machine Learning, you can broaden your analytics with machine learning and deep learning capabilities that are accessible across your organization for better visualization and reporting. For more information, see the documentation.

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription: **crush** **Resource group**: **(New) rg-sascam-demo** **Create new**

Instance details

Region: **East US**

Deployment Name: **viyademo**

Public IP address: **(New) myviyalipip** **Create new**

Deployment DNS Prefix: **viyademo** **eastus.cloudapp.azure.com**

SSH Public Key: **ssh-rsa AAAAB3hzaC1yc2EAAQADQABAAQBgQCjHw+EDUM708u7...**

Viya administrator password: *********

Confirm password: *********

Managed Application Details

Provide a name for your managed application, and its managed resource group. Your application's managed resource group holds all the resources that are required by the managed application which the consumer has limited access to.

Application Name: **viyademo**

Managed Resource Group: **rg-sas-viya-azure-20220817090742**

Validation Passed

Basics **Review + create**

Metered Internal Only

Internal SAS test plan intended to validate the Azure Application - Managed Application ARM template for Project Crush and includes metering dimensions to use when testing Azure Marketplace Metering APIs.

sas-institute-560503.sas-viya-azure-20220817090742 | Overview

Deployment

Overview

We'd love your feedback!

Deployment is in progress

Deployment name: sas-institute-560503.sas-viya-azur... **Start time:** 8/17/2022, 9:14:00 AM

Subscription: crush **Resource group:** rg-sascam-demo **Correlation ID:** c6ed8db9-ea90-4b97-a01c-f386c

Deployment details

Resource	Type	Status	Operation details
No results.			

SAS

"Welcome Experience" für neue Benutzer von SAS Viya

The screenshot shows the "Welcome Experience" for new users of SAS Viya. At the top left, a blue callout box says "Jump right in! Go straight to any application using the navigation menu at any time." On the top right, there are icons for help, search, notifications, and user profile. The main area starts with a greeting "Hi Jessie Doe," followed by "Welcome to SAS Viya!" Below this is a graphic of three 3D cubes connected by dashed lines, with one cube highlighted in blue. To the right of the graphic, there are four sections: "Analytics Lifecycle" (SAS STUDIO), "Prepare Data" (SAS STUDIO), "Explore and Visualize" (SAS VISUAL ANALYTICS), and "Manage Models" (SAS MODEL MANAGER). Each section includes a title, a brief description, and links to sample code or notebooks.

Jump right in!
Go straight to any application using
the navigation menu at any time.

Hi Jessie Doe,
Welcome to SAS Viya!

Learn more about the
► **Analytics Lifecycle**

SAS STUDIO
Develop Code
View sample code
View sample Jupyter notebook

SAS STUDIO
Prepare Data
Learn how to load your data

SAS VISUAL ANALYTICS
Explore and Visualize
Learn how to create a report

SAS MODEL STUDIO
Build Models
View a sample model pipeline

SAS MODEL MANAGER
Manage Models
Learn how to manage models
Learn how to import Python models

"Welcome Experience" für neue Benutzer von SAS Viya

SAS® Model Manager - Manage Models

☰

Home

Models

Projects

Deployments

Tasks

Deployments

Variable Distribution

YOJ

Percent

12

10

8

6

4

2

0

Stability

Deviation Index

0.00008

0.00006

0.00004

0.00002

0.00000

2

1

0

Let's get started!

Watch the video for a quick overview of the product.

We've loaded a sample model deployment for you. Watch the quick video below and explore on your own or launch the full course and follow along.



Begin Course on Managing Models

Okay, let's go!

Definition Run Clear All View Job History

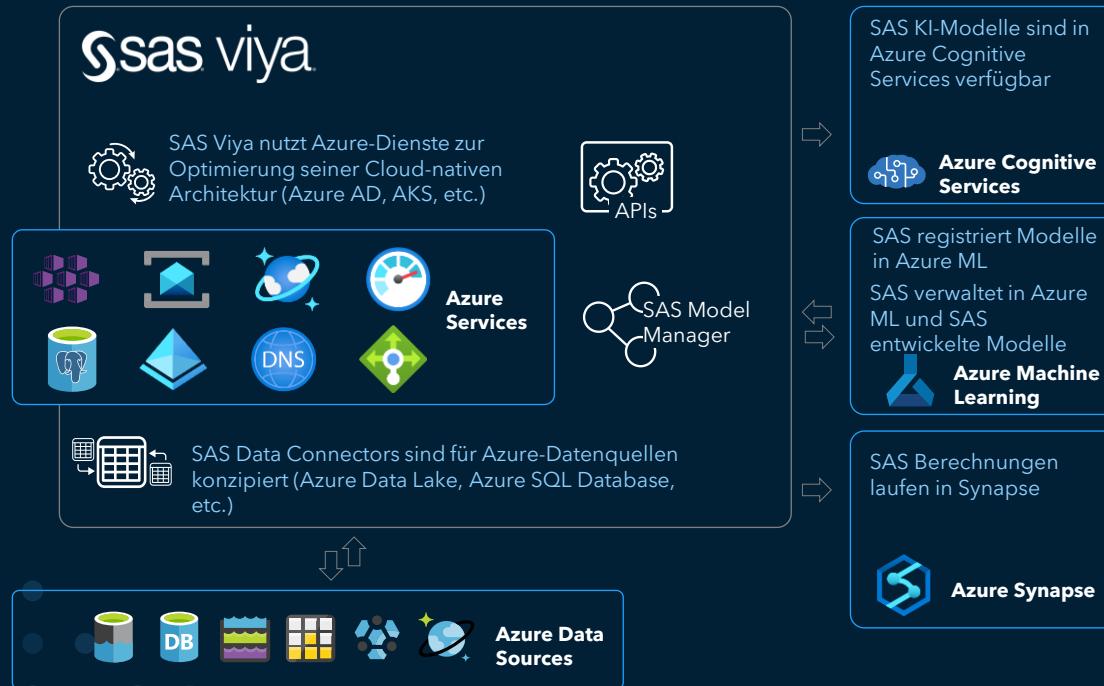
Q3 Q4

Label

JOB YOJ NINO

?

Vision der Technologie-Integration

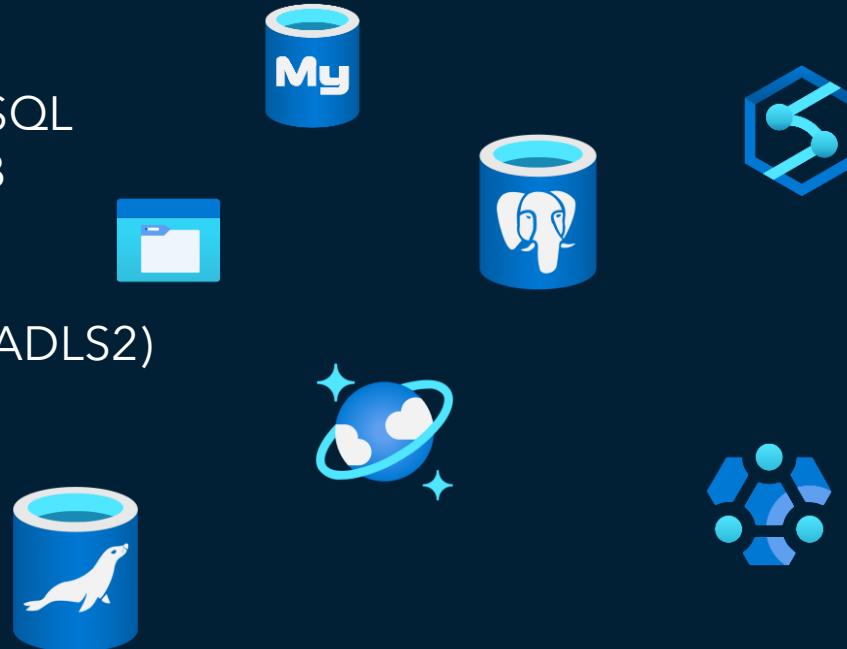


Vorteile

- Optimierte Ressourcen für die **Cloud-Integration**
- Einfacher Zugriff auf **alle Daten**
- Entwicklung **fortgeschrittenener Modelle** mit jeder Sprache
- Beschleunigte** Entwicklung und Verwaltung von KI-Modellen

Azure Datenspeicher mit Verbindung zu SAS

- Azure Database for MySQL
- Azure Database for PostgreSQL
- Azure Database for MariaDB
- Azure Cosmos DB
- Azure Redis Cache
- Azure Data Lake Storage 2 (ADLS2)
- Azure Synapse Analytics
- Azure HDInsight
- Azure Databricks
- Microsoft OneDrive



Integration mit GitHub Enterprise

GitHub Actions für GitOps mit SAS

The screenshot shows a GitHub Enterprise interface for the repository `sas-institute-shared / model-ops-demo`. The 'Actions' tab is selected. A recent action named `Commit pol_churn_(By_MLPA_RFbD5) /uaa/mmprojectpublic/GitHubEnterprise... Model-Ops #14` is listed with a green checkmark indicating success. The action was triggered 12 hours ago in 9s. The job `model-movement` is expanded, showing a list of steps: Set up job, Run actions/checkout@v3, Test value, Clone the Repository to Viya, Import Model, Post Run actions/checkout@v3, and Complete job. All steps are marked as completed with green checkmarks.

Enterprise Search or jump to... Pull requests Issues Marketplace Explore

🔒 sas-institute-shared / model-ops-demo Internal

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

✓ Commit pol_churn_(By_MLPA_RFbD5) /uaa/mmprojectpublic/GitHubEnterprise... Model-Ops #14

Summary

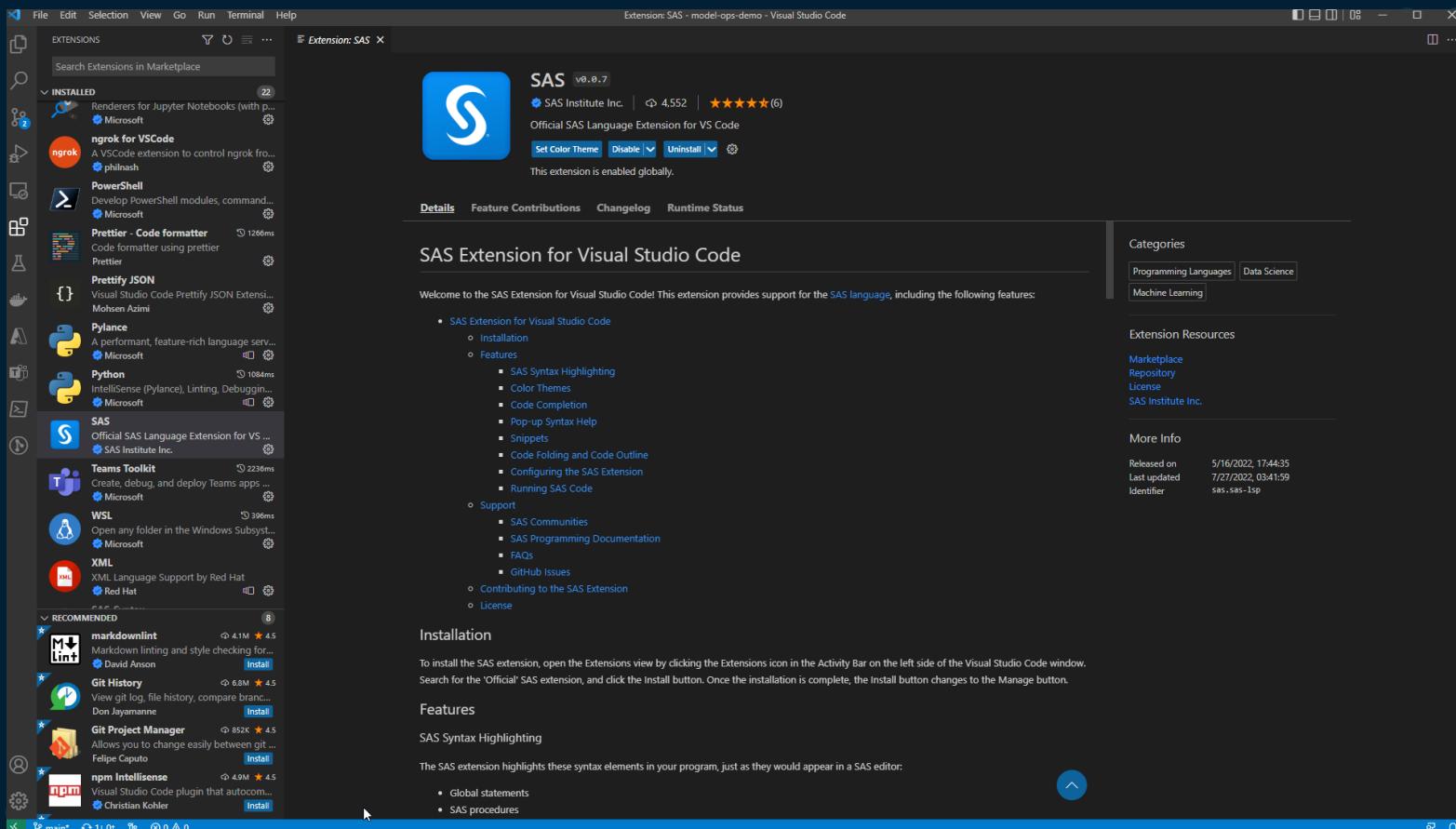
Jobs

model-movement

model-movement succeeded 12 hours ago in 9s

- > ✓ Set up job
- > ✓ Run actions/checkout@v3
- > ✓ Test value
- > ✓ Clone the Repository to Viya
- > ✓ Import Model
- > ✓ Post Run actions/checkout@v3
- > ✓ Complete job

Integration mit VSCode



Veröffentlichen von Modellen

nach Azure



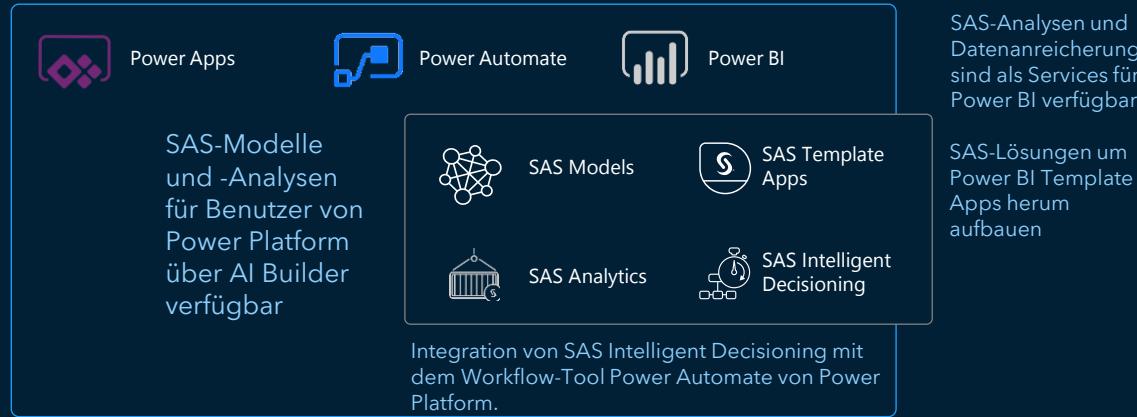
Azure
Machine
Learning
(AML)



Azure
Container
Registry



Vision der Technologie-Integration



Vorteile

- **Einbettung von SAS-Modellen in Power Apps** für die Analytik hinter den Kulissen
- **SAS Intelligent Decisioning** in Geschäftsabläufe **einbetten**
- Treffen Sie KI-gesteuerte Entscheidungen mit **SAS KI** und Analytik hinter **Power BI-Visualisierungen**
- **Jeder**, unabhängig von seinem Kenntnisstand, nutzt die Analytik, **um Entscheidungen zu treffen**

Anwendungsfall Kreditgenehmigung



Home Equity Loan Request

Customer ID:
1

Job role
Mgr

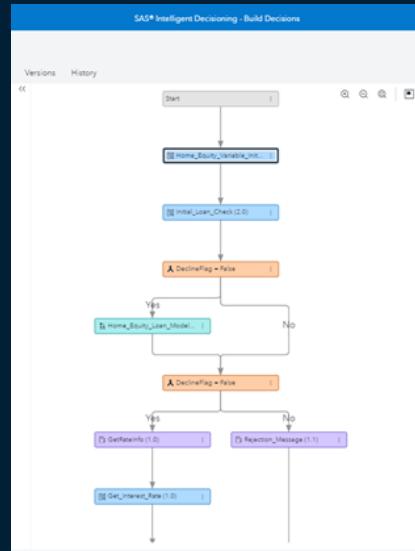
Reason for Loan
HomeImp

Value of Property
500000

Requested Loan amount
1000

Request Loan

sas



Congratulations!! We will send your offer immediately

Please provide your email address here:
edwin.vanunen@sas.com

Send

Integration SAS Viya & MS Power Apps

SAS Decisioning Connector



Loan Request



Power Automate



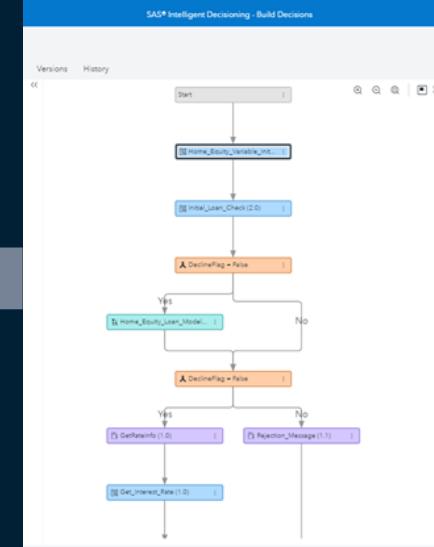
Data Connector

MAS
(Micro Analytic Service)

Approve/Decline

Microsoft Power Platform

Loan Approval Decision



SAS Intelligent Decisioning



Integration SAS Viya & MS Power Apps

SAS Container Runtime in Azure (SCR Azure)



Loan Request

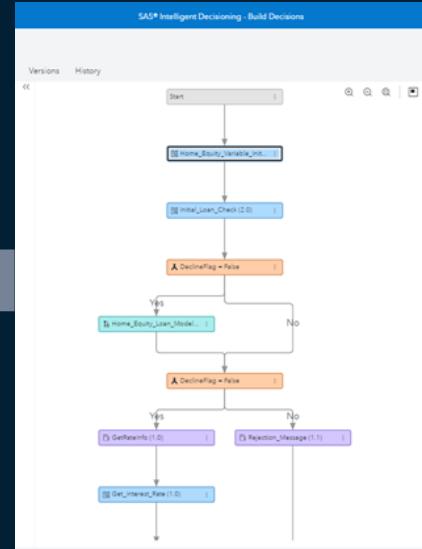


HTTP

SCR
(Azure App Service)

Approve/Decline

Loan Approval Decision



Microsoft Power Platform

SAS Intelligent Decisioning



SAS Decisioning Data Connector

Establish HTTP connection between MAS and a MS Power Flow

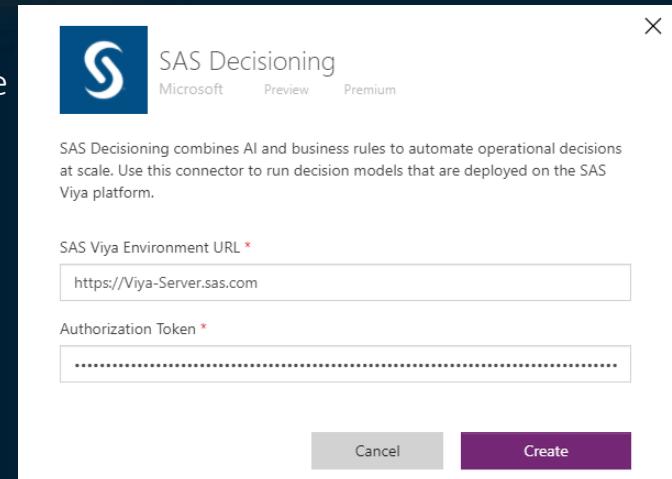
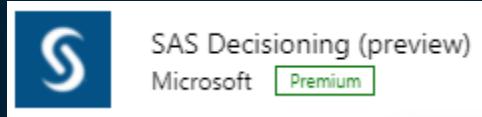
- Prerequisites

- SAS Intelligent Decisioning license
- PowerApps with Premium License
- Allow calls coming from the Power Platform IP Addresses Range

- Register Client (SAS Admin)

- Obtain access token (SAS Admin)

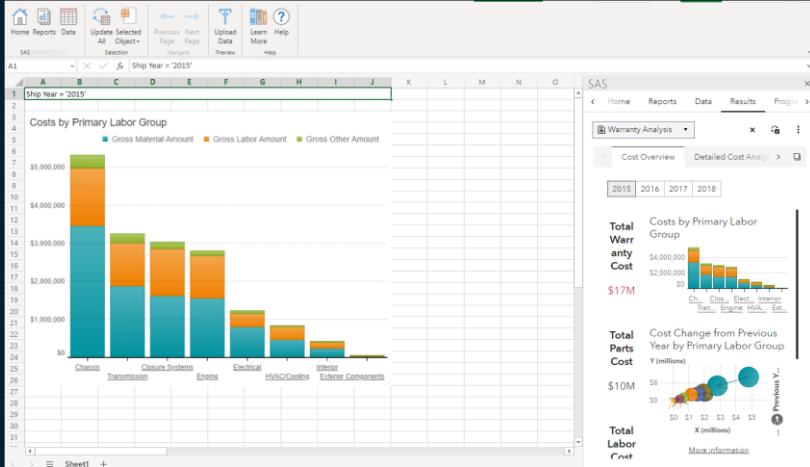
- Setup Decisioning Data Connector



Integration mit Office365

Aktuell Excel & Outlook

- Suchen und Einfügen von VA Reports (beide)
- Daten filtern, sortieren und einfügen (Excel)
- CAS Tabellen aus Excel heraus generieren (Excel)



The screenshot shows the SAS Data tab interface. A dropdown menu is open over a table entry named 'AIRLINE'. The options in the menu are: 'Open in Results', 'Add to Favorites', and 'Open in SAS Information Catalog'. Other visible table names include AIRSHIFT, APPLIANCE, ASSCMGI, BANKFDN, BANKFDN_SOURCE_TIME_PERIOD, and BANKFDN_SUBSET_FILTER_NODE.

SAS und der moderne Arbeitsplatz

Integration mit Microsoft Teams

Unsere gemeinsame Vision als SAS und Microsoft ist es, zu zeigen, wie wir die Analytik demokratisieren, indem wir Geschäftsanwendern die Möglichkeit geben, über die vertraute Microsoft Teams-Oberfläche an Prozessen wie ModelOps teilzunehmen.



- SAS Conversation Designer integriert Chatbots mit Teams.
- Der Modell-Governance-Prozess von SAS Model Manager wird über Teams abgewickelt.
- Berichte und Dashboards aus SAS Visual Analytics und Power BI können auf einer Registerkarte für Teams angezeigt werden.

Teams Nachrichten am Ende eines ETL Prozess

