

# Access the power of SAS Decisioning from Snowflake

Integrating SAS Container Runtime with Snowpark Container Services

Prasenjit Sen, Decision Runtime Technical Lead, SAS Institute.

Prash Medirattaa, Senior Partner Engineer - Data Science & ML/AI Snowflake.



## Analytic Model Development



SAS Visual Analytics

SAS VDMML

PYTHON  
LUA

SAS Visual Text Analytics

SAS  
Model Manager

SAS  
Intelligent Decisioning

# Intelligent Decisioning

Fully Operationalizing Analytics with SAS Viya



Results

Analytical output



Performance Data

Performance results

Decisions/  
Models

Publishing  
Services



## Analytic Execution

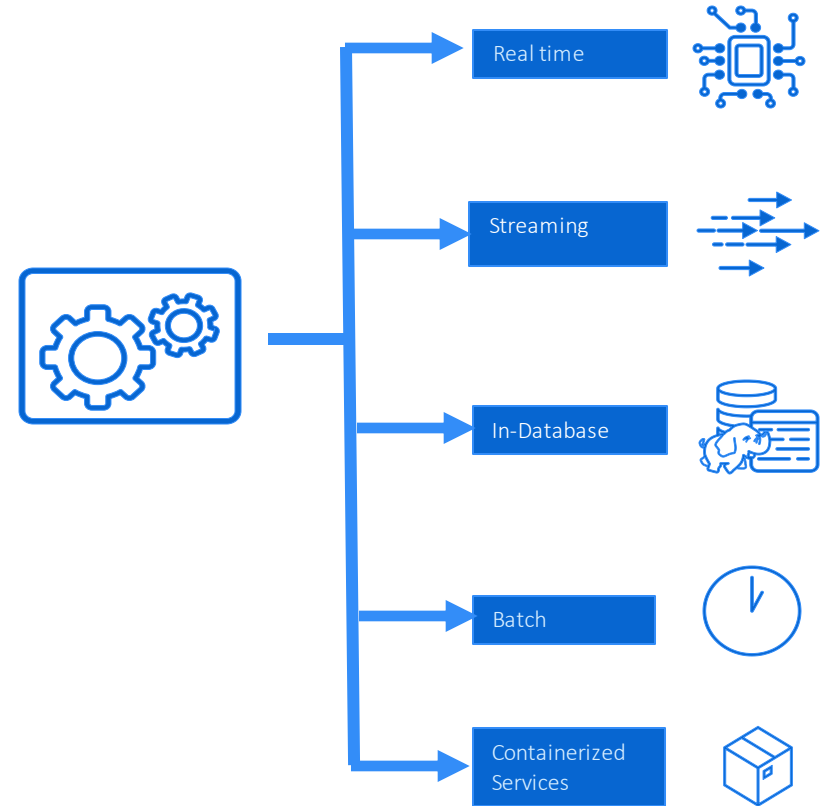
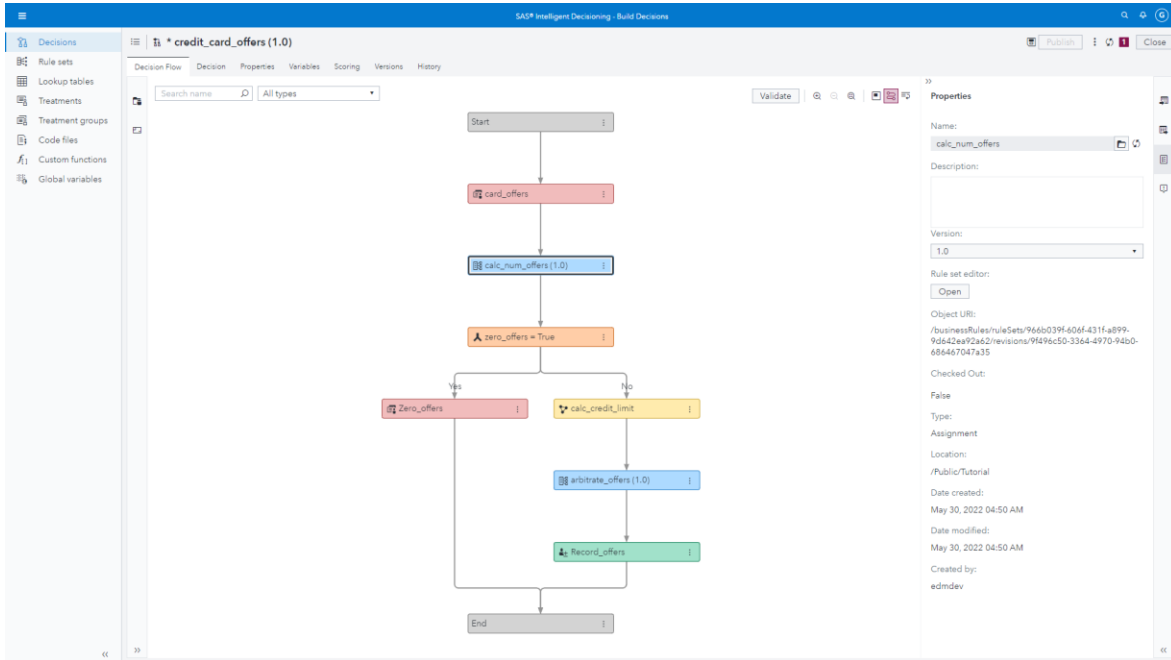
Real time (MAS)  
Containerized Runtime (SCR)

Batch  
In Database  
In HadoopSAS  
Model Manager

SAS  
Model CAS  
In-Memory Compute

  
Streaming

# Design Time / Runtime



# SAS CONTAINER RUNTIME

SAS Container Runtime is an OCI compliant container that contains the following:

- Model or Decision
- Python content
  
- REST API (Open API 3 described)
- SAS Microanalytic Execution Engine
- SAS DS2 runtime
- SAS Libraries
- Python runtime
- Red hat UBI8 container base image

1

## **Container to execute models/decisions**

Portable to any standard OCI-compliant container runtime

2

## **Reduced Runtime Costs**

Reduced dependencies and smaller footprint allow for smaller runtime

3

## **Free to execute**

Customer can run as many instances as you want at no additional cost

4

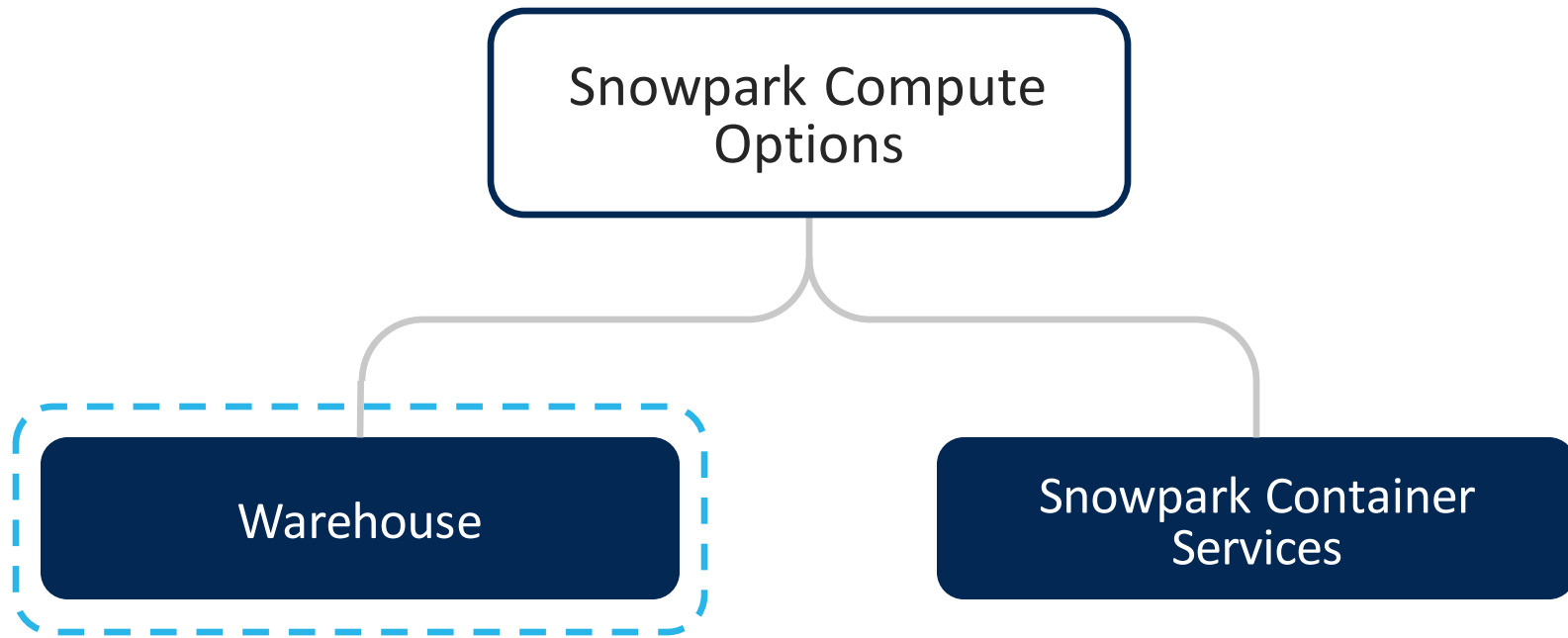
## **Highly Scalable**

Scalable using standard orchestration frameworks like Kubernetes

5

## **DevOps Support**

Use GitOps or other standard tools to manage promotion of containers



# Snowpark Container Services

## LANGUAGE & HARDWARE FLEXIBILITY

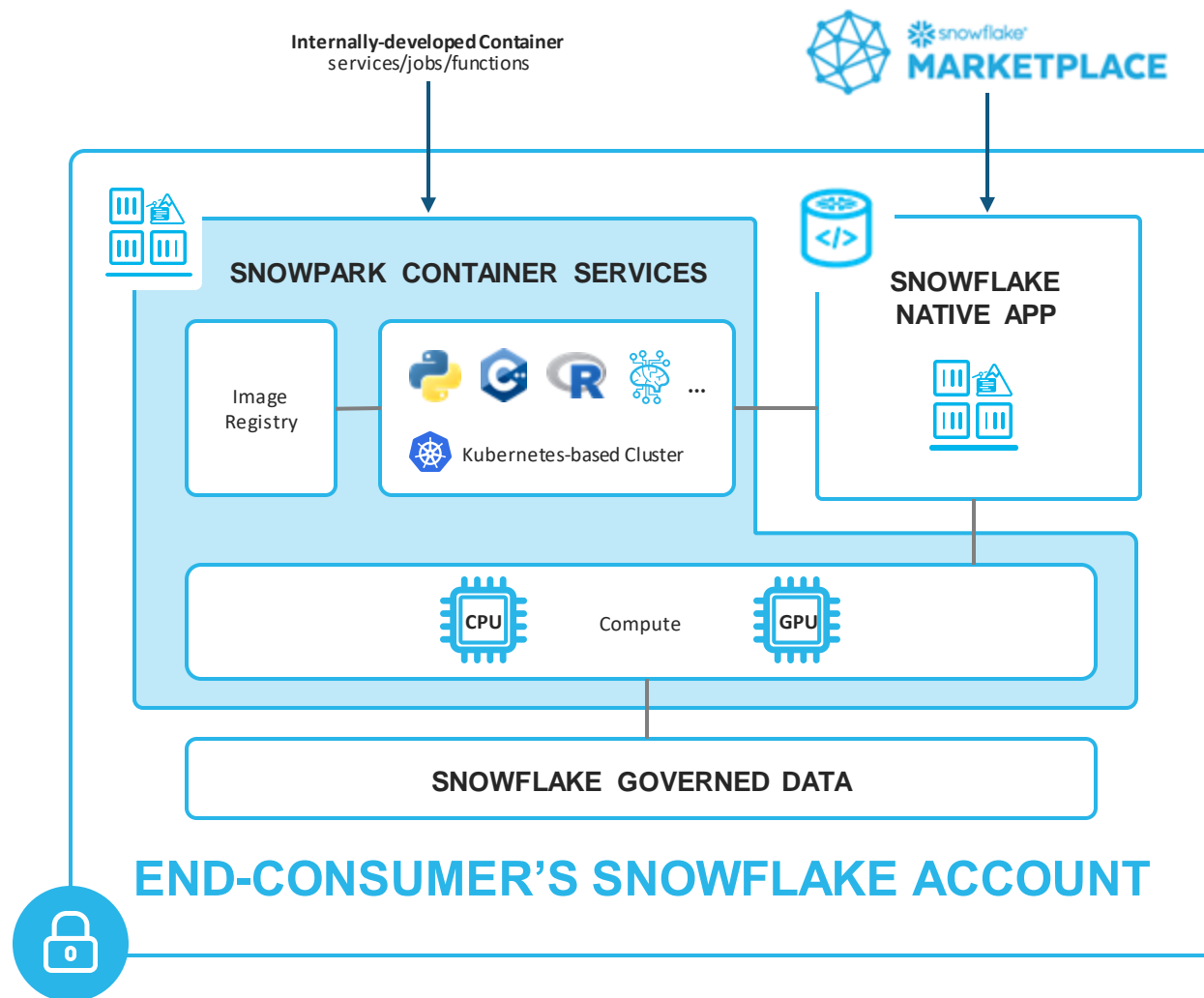
Build in any programming language, package as a container image and deploy in configurable CPUs & GPUs

## UNIFIED SERVICES EXPERIENCE

Effortlessly deploy with integrated image registry, elastic compute infrastructure and managed Kubernetes-based cluster

## BRING SOPHISTICATED APPS TO THE DATA

Run entire containerized applications from third-party developers in your account as Native Apps via Snowflake Marketplace



# Workloads Supported



## AI/ML WORKLOADS

Train and execute inference for large scale models using GPUs with any language including Python and R



## LLMs

Run open source LLMs, and third-party LLMs tuned to your data.



## OPTIMIZED PROCESSING

Run C/C++ workloads and web APIs that process large amounts of data

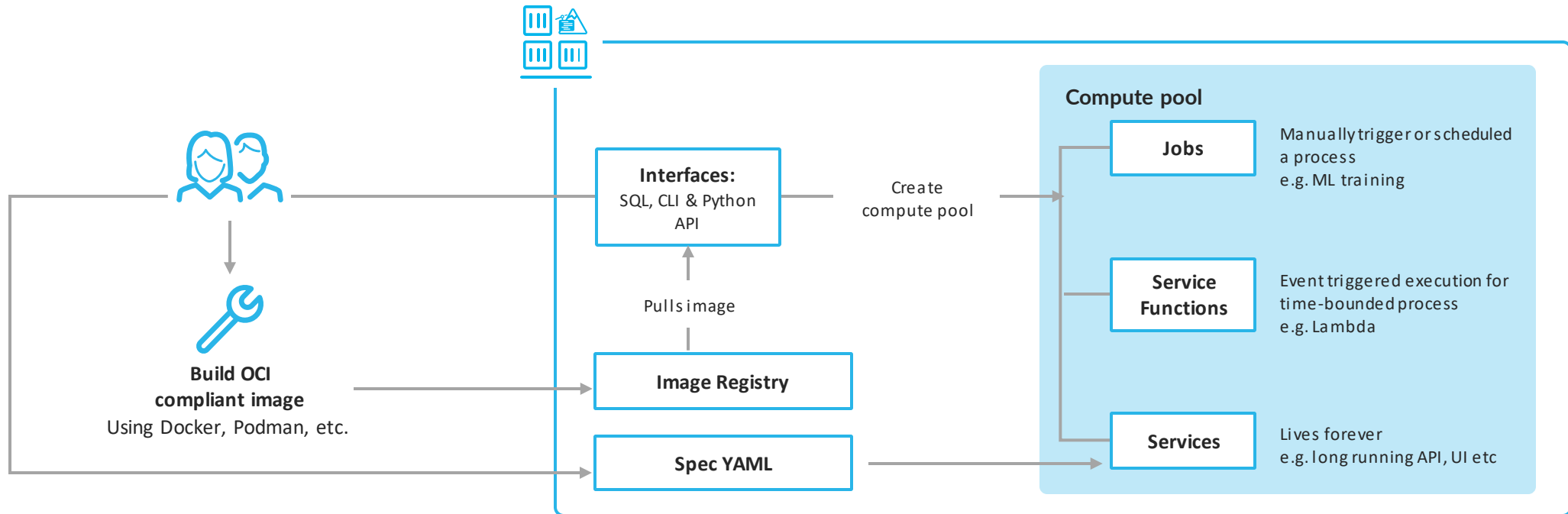


## APPLICATIONS

Run any component of an app from APIs to UIs

**& more**

# Development to Deployment Cycle



Interfaces: SQL (PrPr), CLI & Python API (dev)



Private Image Registry



10 Instance Types (CPUs/GPUs)



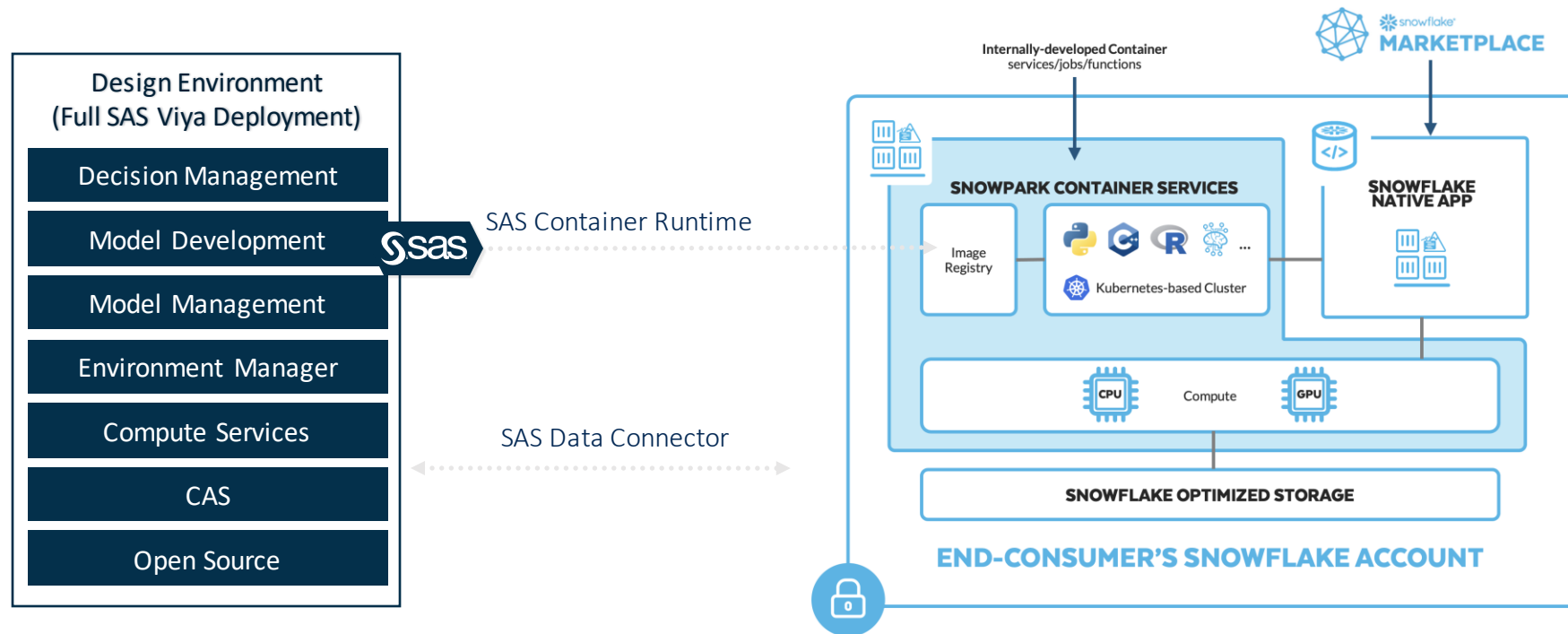
Secure Egress & Ingress



Service to Service Communication



# SAS Viya & Snowpark Container Services



# DEMO

Business case: Score airline delay data to predict probability of delay.