Python

SAS® Viya™

Welcome!

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- SAS
- SQL
- Python
- Tableau

Connect with me for Python and CAS Action blogs!

Workshop Overview

SAS Viya Overview

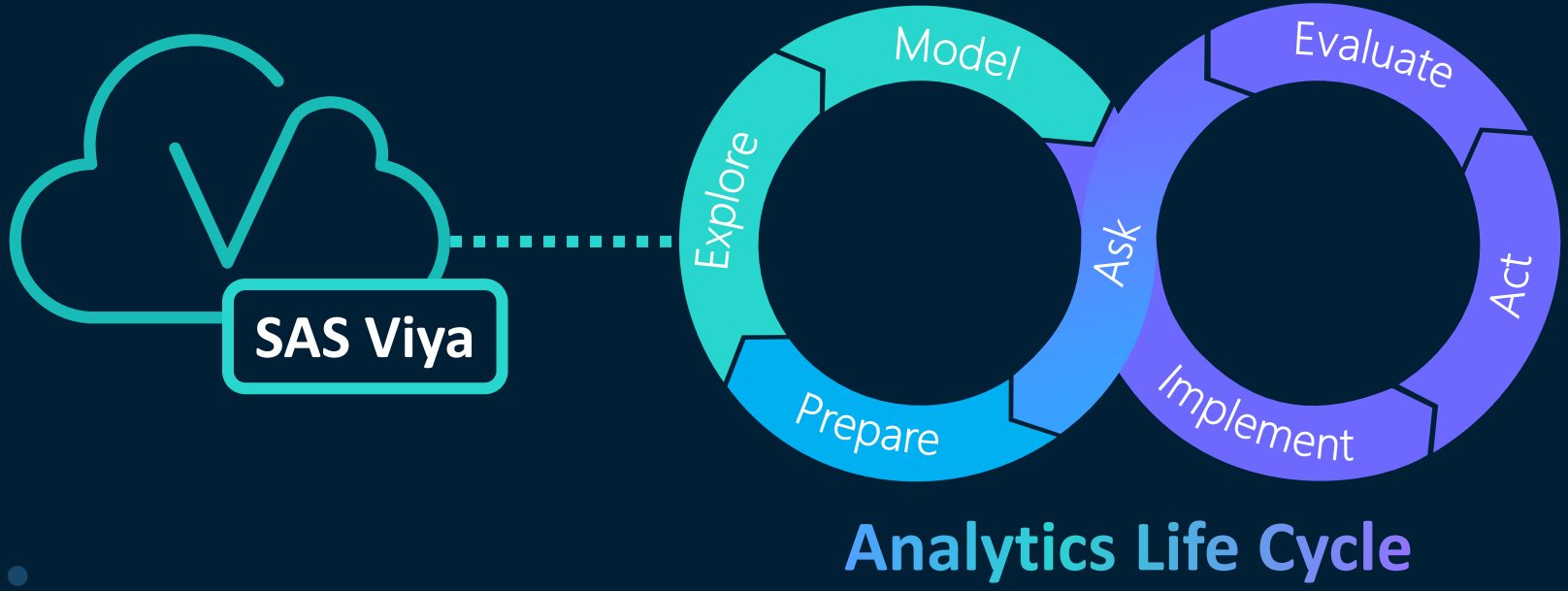
CAS API Overview

Python Demonstration

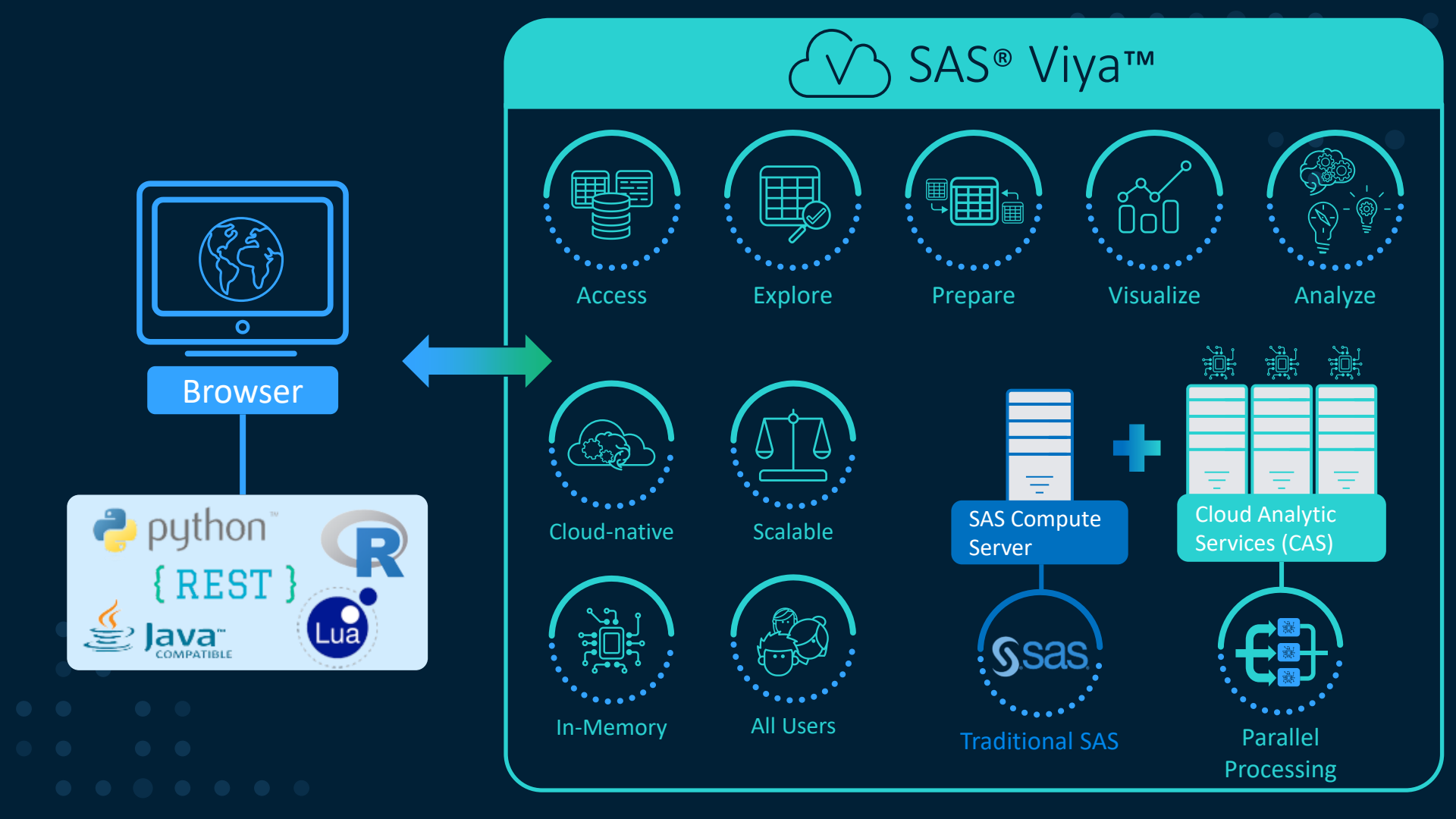
SAS Viya Overview

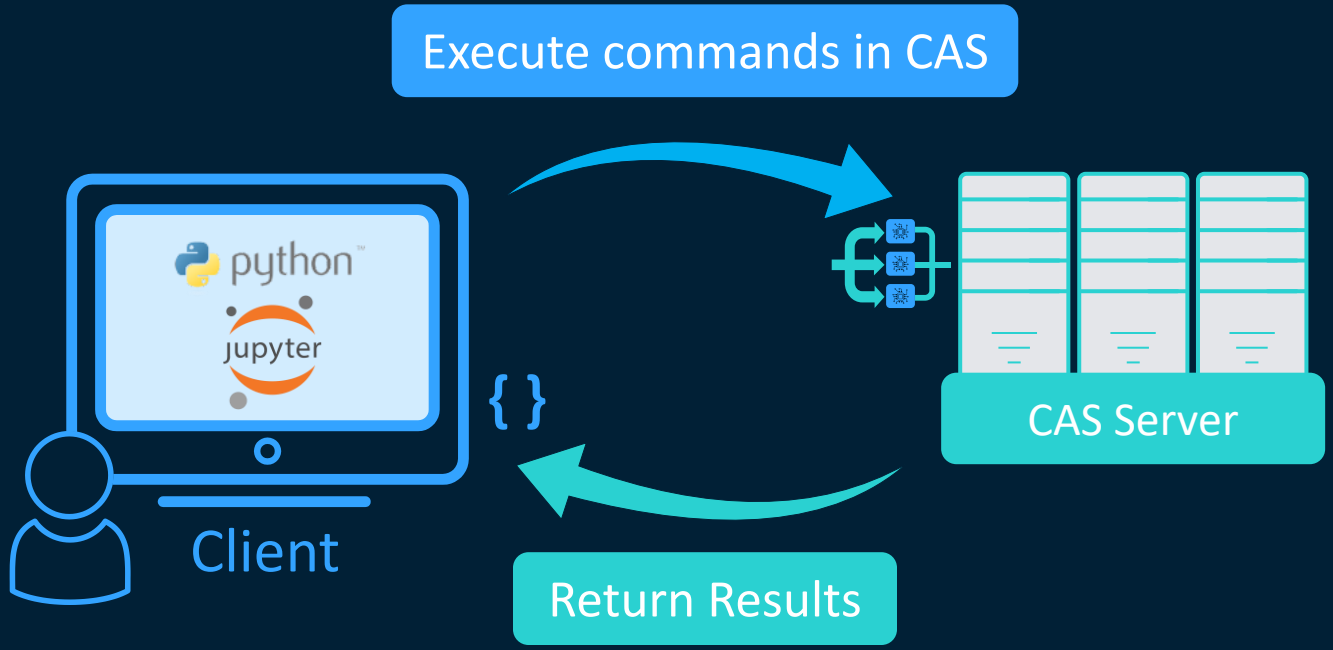
SAS® Viya™

SAS Viya Overview



Analytics Life Cycle


SAS® Viya™
Access
Explore
Prepare
Visualize
Analyze
Browser
python
{ REST }
R
Java COMPATIBLE
Lua
Cloud-native
Scalable
In-Memory
All Users
SAS Compute Server
Traditional SAS
Cloud Analytic Services (CAS)
Parallel Processing

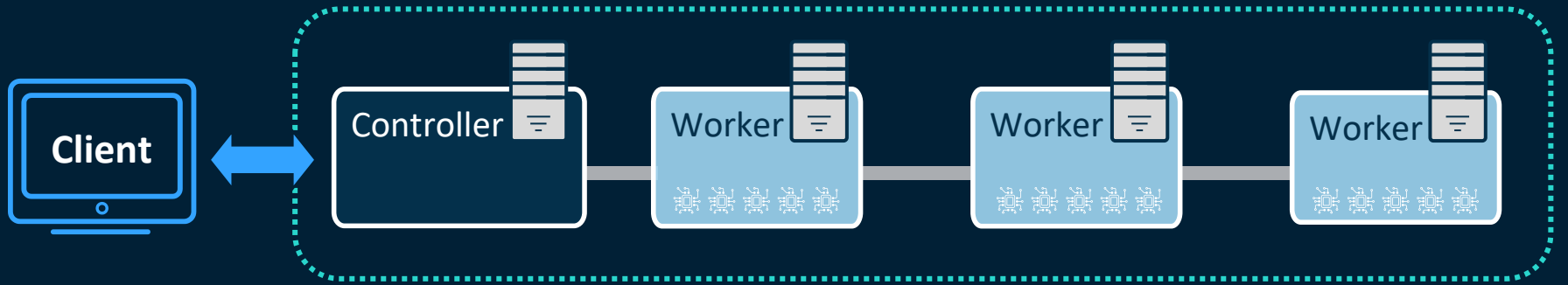

Execute commands in CAS
python
jupyter
{ }
CAS Server
Client
Return Results

Cloud Analytic Services (*CAS*) in *SAS Viya*

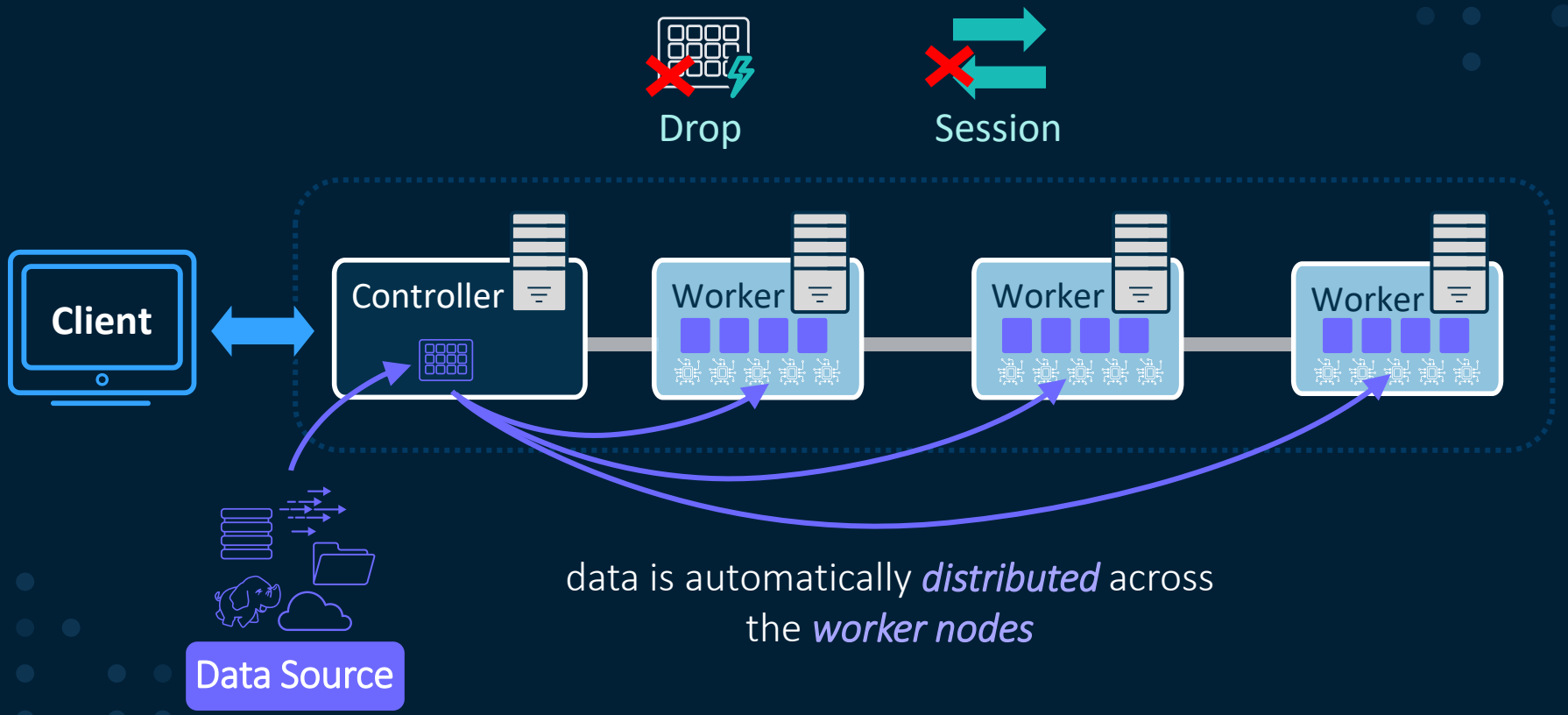
Cloud-native, *high-performance* *in-memory analytics* and *distributed* computing engine.

CAS Server

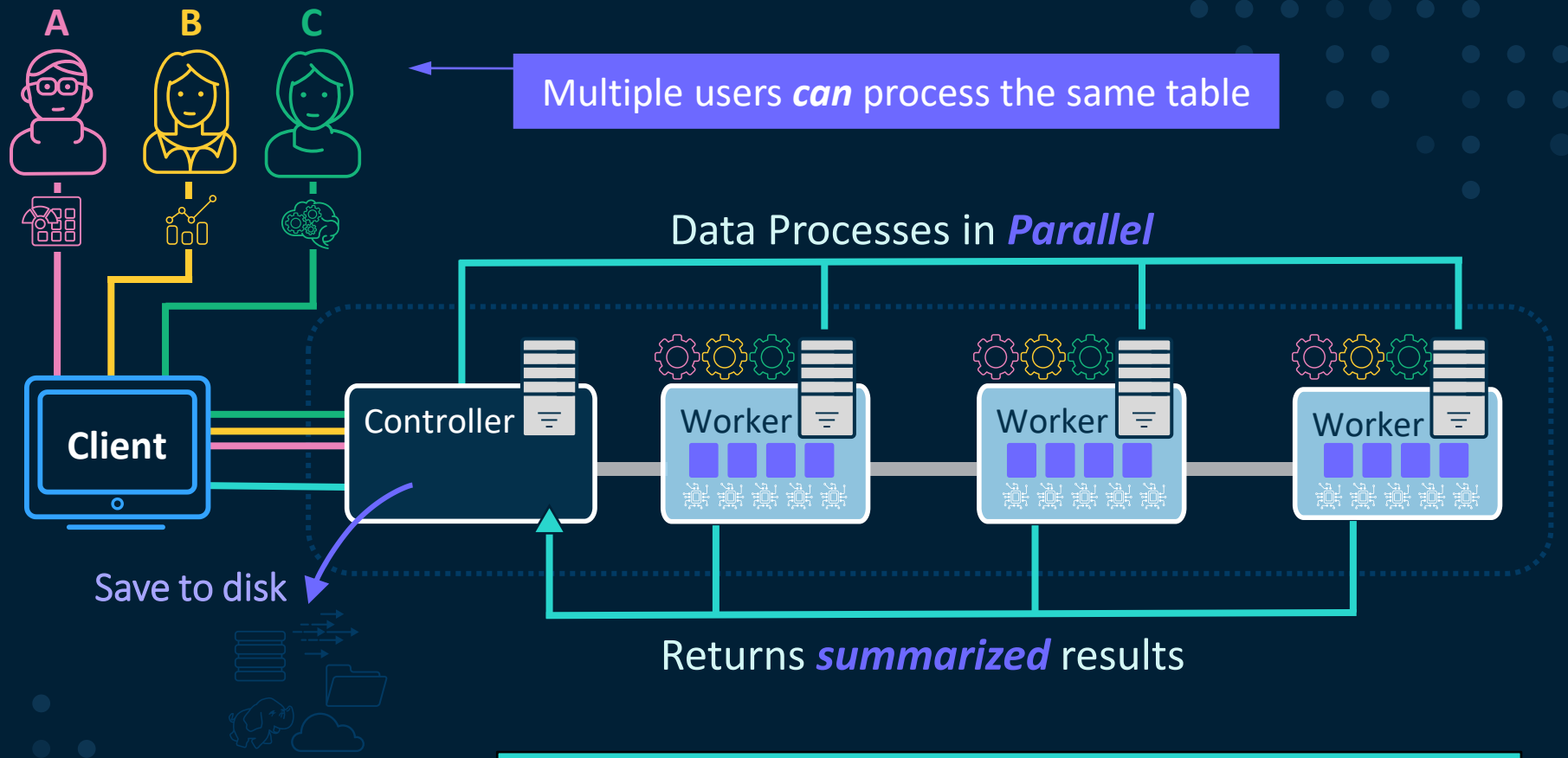
CAS Server



Data *persists* in memory



data is automatically *distributed* across the *worker nodes*



CAS ***maximizes*** parallel processing and ***minimizes*** disk I/O.

Cloud Analytic Services (CAS) in SAS Viya

Languages

- SAS[1]
- Python[3]
- REST API
- FedSQL
- R[3]
- Java[2]
- Lua[3]

Applications[5]

- SAS Visual Analytics
- SAS Data Preparation
- SAS VDMML[6]
- SAS Visual Statistics
- SAS Visual Forecasting
- SAS Optimization
- SAS Visual Investigator
- SAS Visual Text Analytics
- SAS Customer Intelligence 360

API[4]

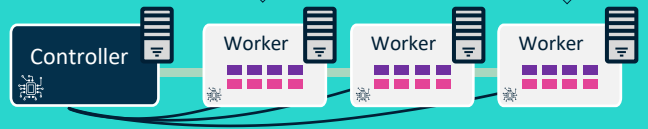
CAS Language (CASL)

Optimized units of work for the *distributed* CAS server.

CAS Actions

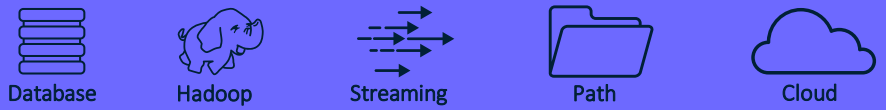
Manage Data | Process Data | Analyze Data | Model Data | DATA Step | FedSQL | DS2

CAS Server

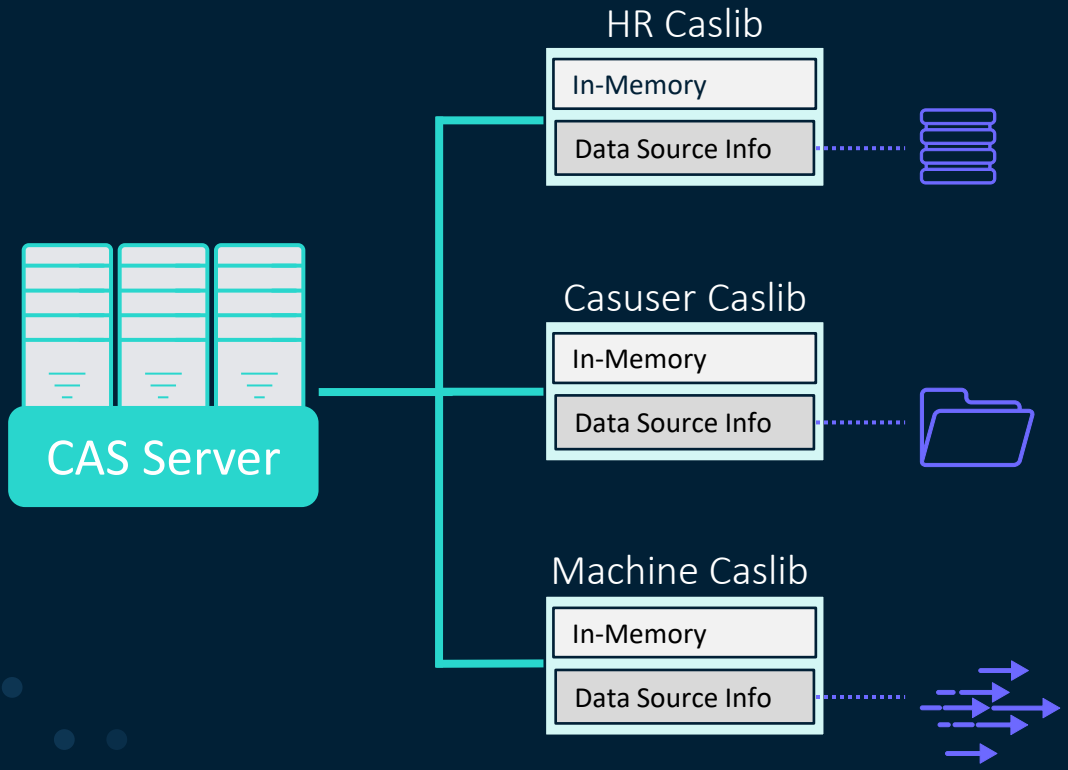


The CAS server can *access* a variety of *data sources*

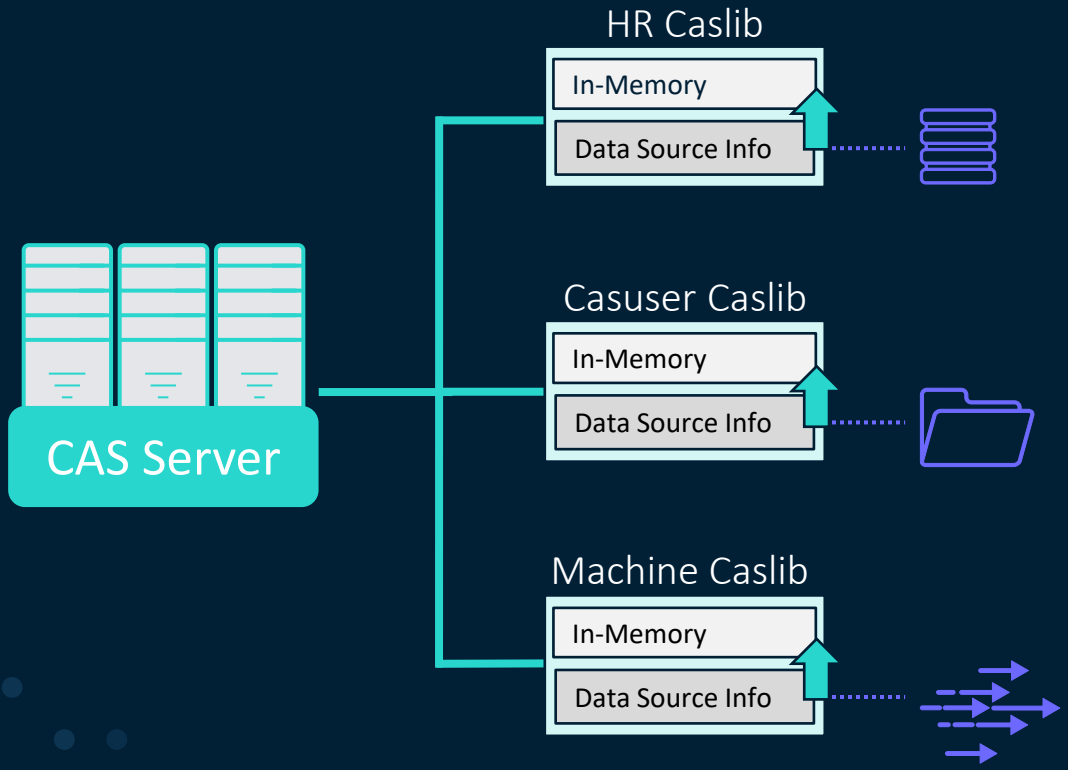
Data Sources



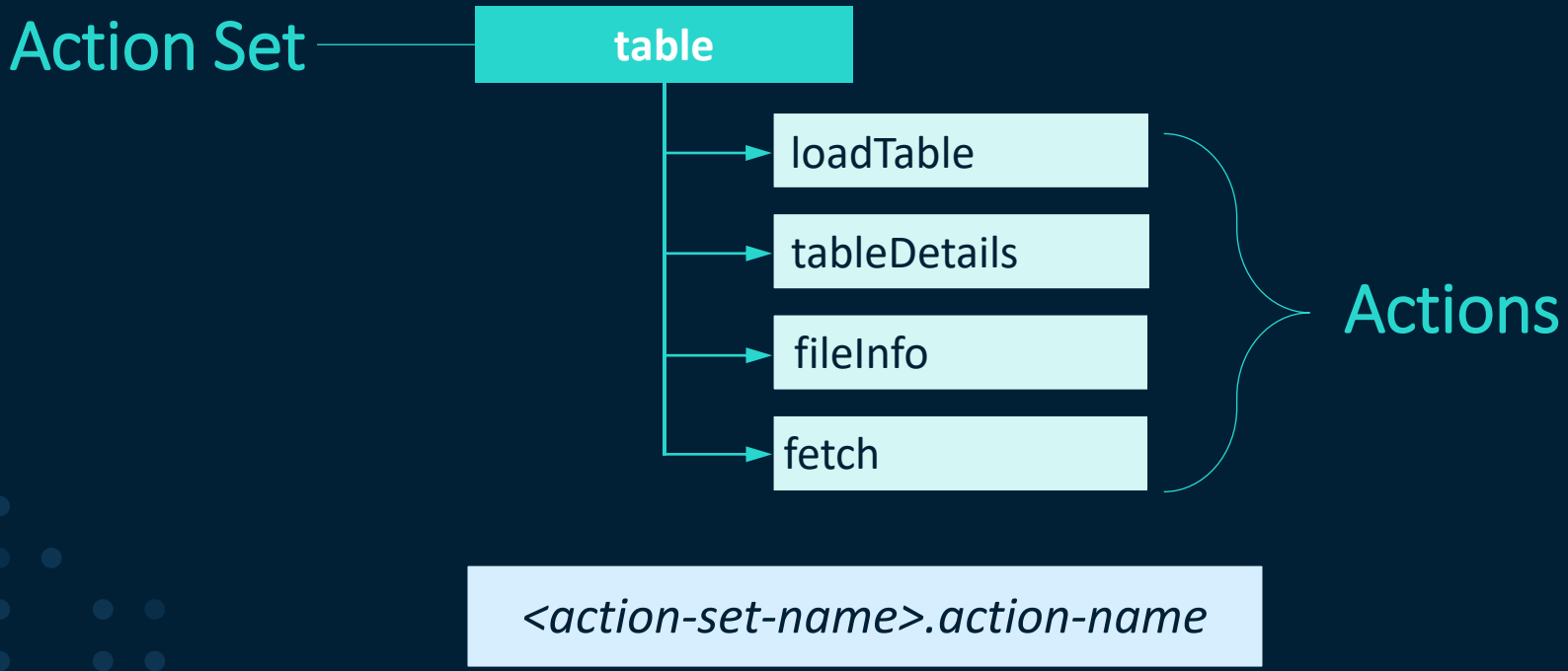
Data in CAS is Stored in CASLIBS



Data Source Files Must be Loaded into Memory

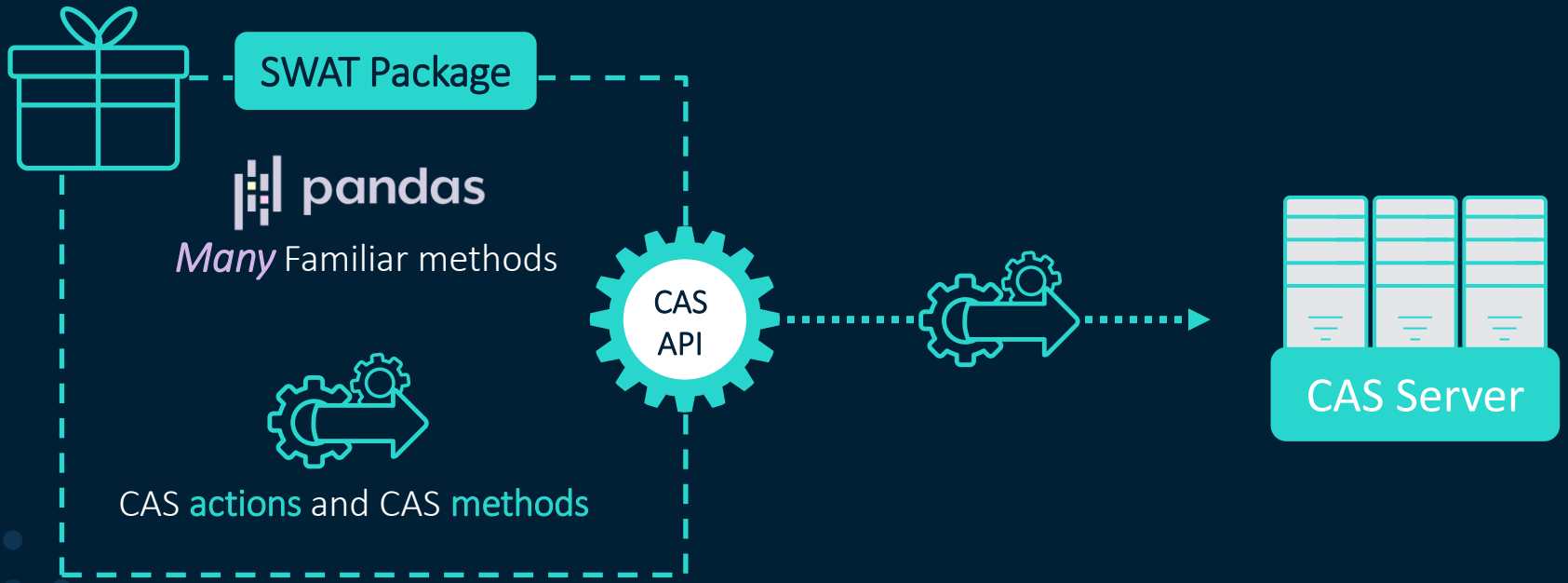


CAS Actions Reside in Action Sets

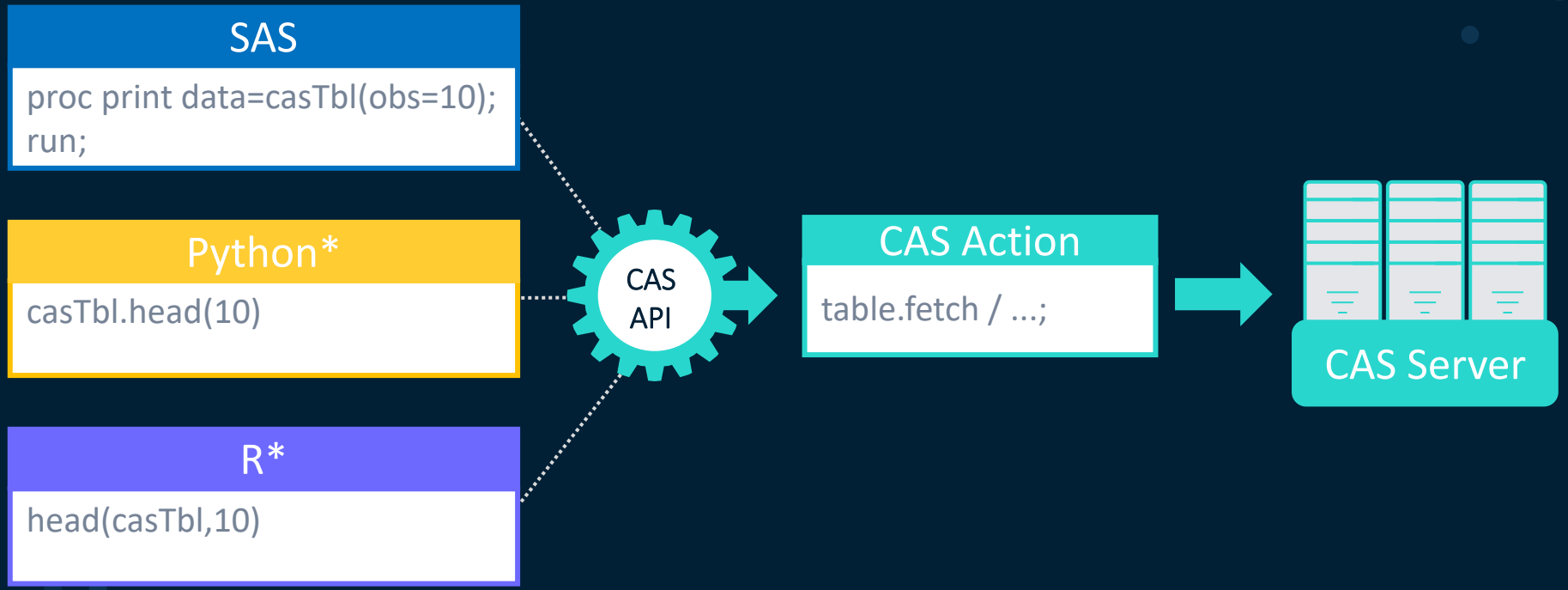


CAS API Overview

Python Integration Through the CAS API

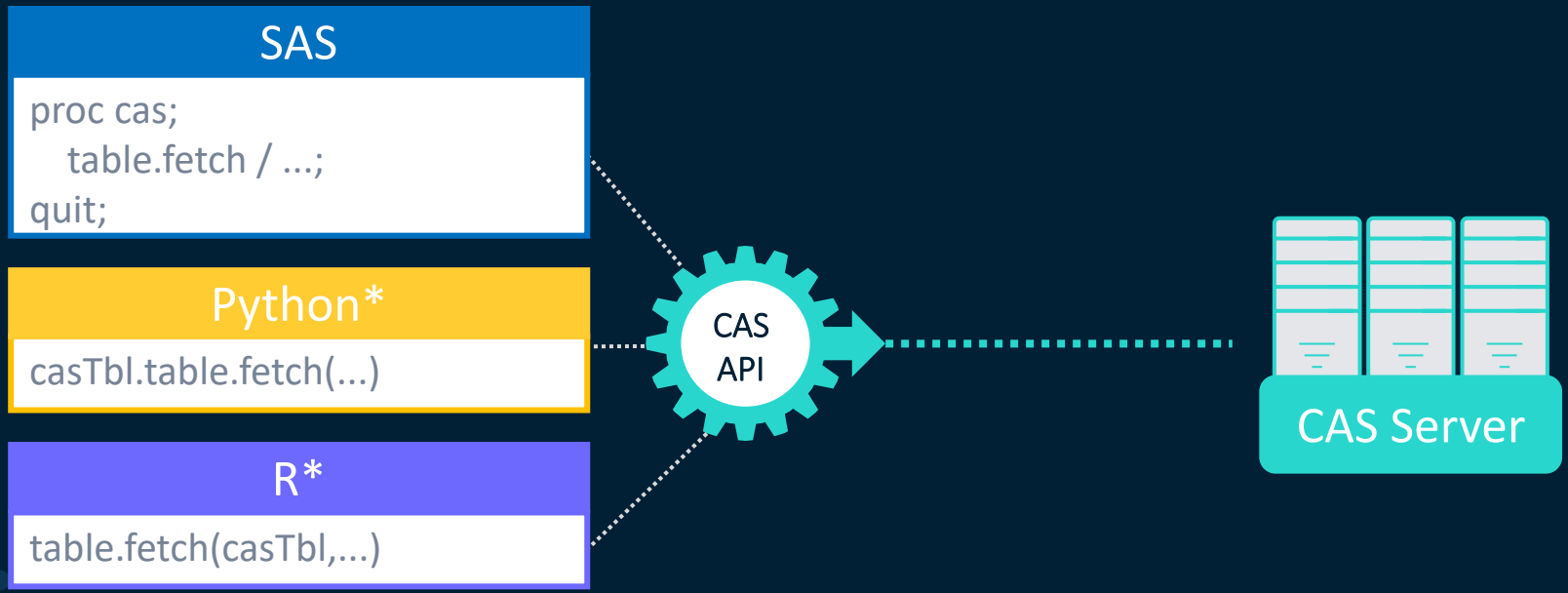


CAS API Example – Using Familiar Methods



* The SWAT package is required.

CAS API Example – Using Actions



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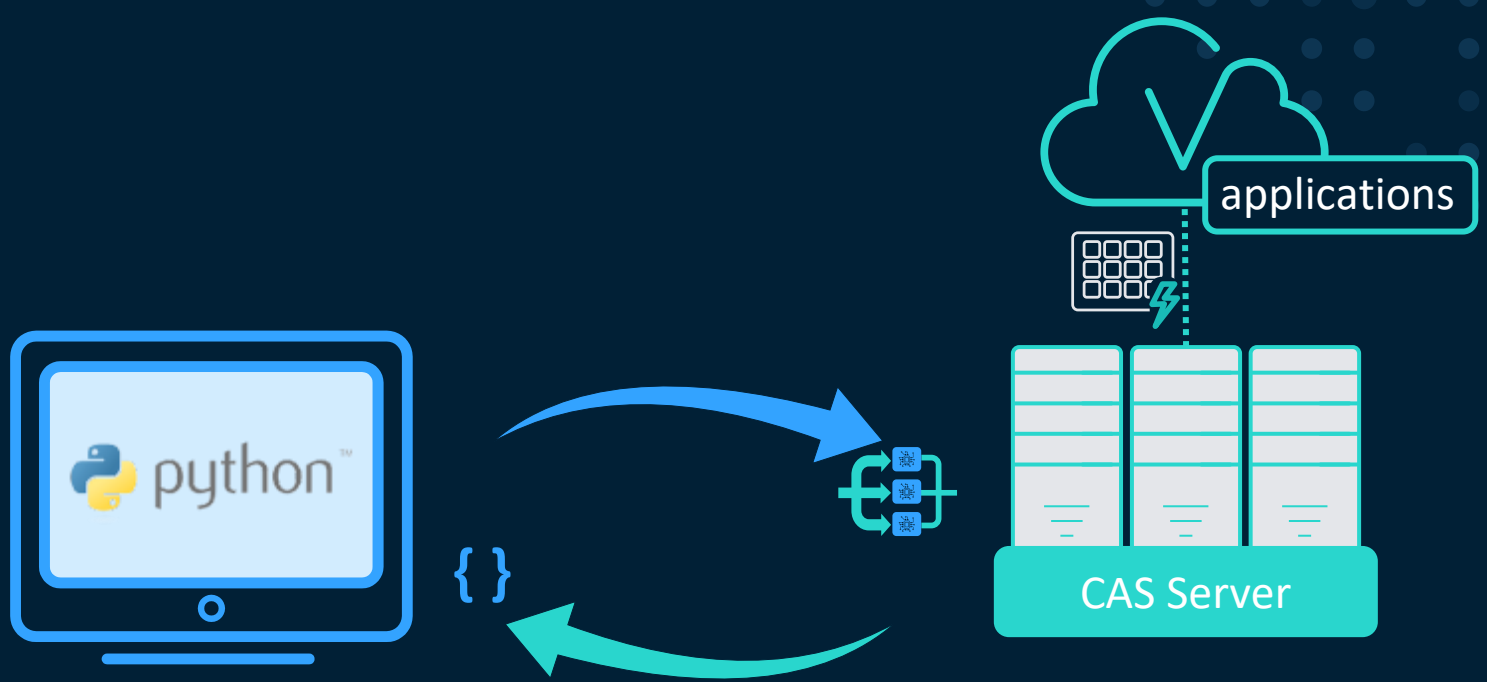

Process the *smaller summarized* results on your client using native language syntax and packages.

Explore, *prepare*, *analyze* and *model* big data in CAS

Python Demonstration