Using REST APIs to Automate Clinical Trial Analysis in a Validated Environment

PhUSE Hands-On Workshop

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Workshop Objective
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- Throughout the workshop, participants will engage in hands-on exercises that demonstrate how to seamlessly integrate a cloud-based repository's capabilities into their workflows by utilizing REST API calls.

  By the end of the session, attendees will have developed executable code in their chosen language—SAS, Python, or R—that can download data from the repository, perform sophisticated data analyses, and upload the results back to the repository.

  This practical experience will ensure that the workshop participants can operate within a secure and compliant framework, ultimately improving the efficiency and reliability of their analytical processes.

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Workshop Use Case

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- The SAS workshop at is designed to provide students with hands-on experience in data analytics and management.

  Participants will begin by importing a diabetes dataset into their analytics environment.

  They will then perform a mixed model analysis (or a similar statistical analysis) on the data to generate meaningful outputs.

  Once the analysis is complete, students will upload their results to the secure repository.

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REST APIs: The Key to Unlocking Your App's Potential
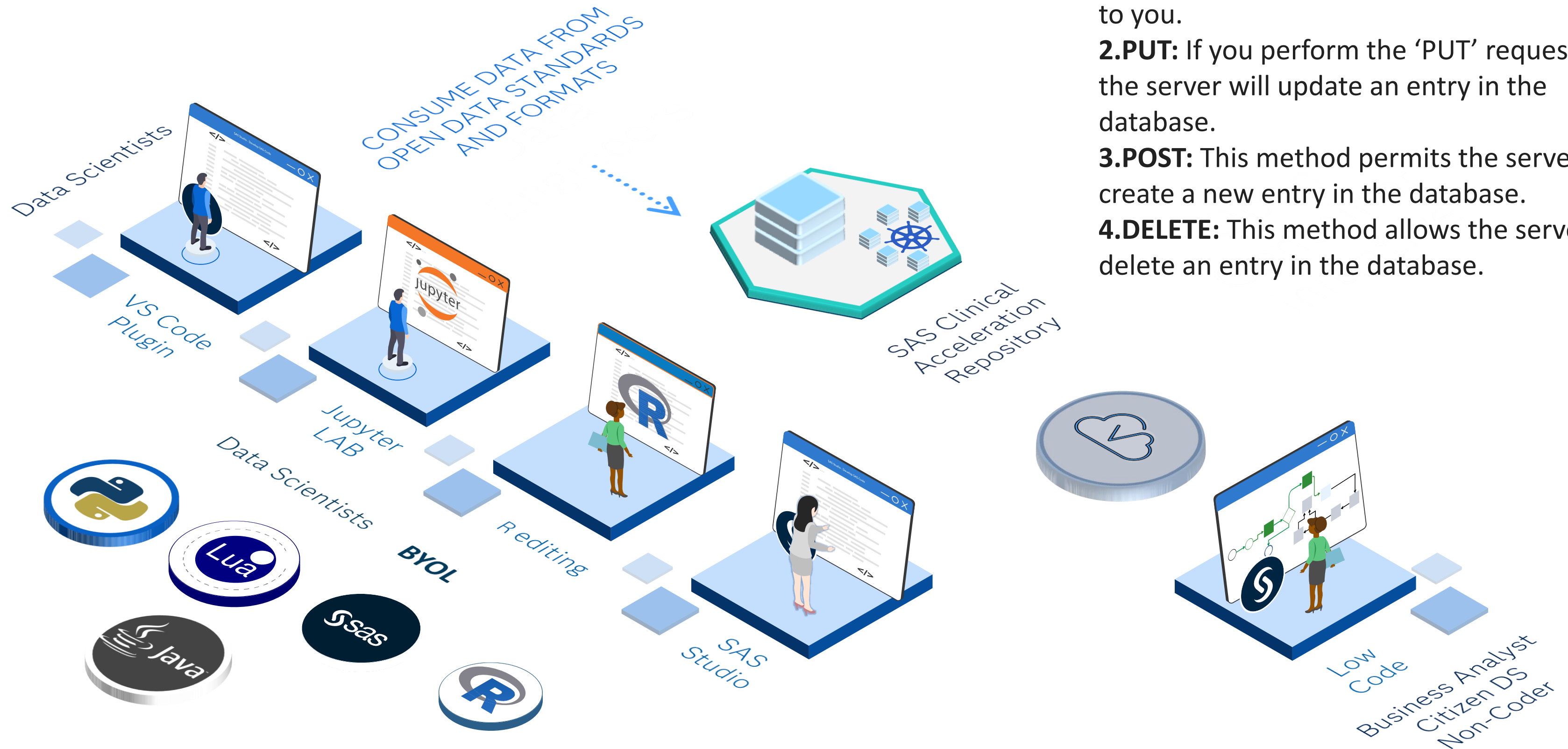
1.**GET:** This method allows for the server to find the data you requested and sends it back to you.

2.**PUT:** If you perform the 'PUT' request, then the server will update an entry in the database.

3.**POST:** This method permits the server to create a new entry in the database.

4.**DELETE:** This method allows the server to delete an entry in the database.

Data Scientists

CONSUME DATA FROM OPEN DATA STANDARDS AND FORMATS

SAS Clinical Acceleration Repository

VS Code Plugin

Jupyter LAB

Data Scientists

BYOL

R editing

SAS Studio

Low Code

Business Analyst
Citizen DS
Non-Coder

Accessing Your IDE

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- To access their Integrated Development Environment (IDE), workshop students need to have a SAS account.

- Begin by logging into the SAS Virtual Machine (URL is on the whiteboard) (VM) using your email address and SAS account password.

- Once logged in, you will have access to both SAS Studio under SAS Viya, providing a robust environment for data analysis and programming.

- Additionally, you can opt to use a Jupyter Notebook, which is equipped with SAS, R, and Python kernels.

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Accessing Your IDE
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https://viya-5e96vcmywb.engage.sas.com/

https://communities.sas.com/

SAS Clinical Acceleration Repository

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- The SAS Clinical Acceleration Repository (CAR) is a cloud-native solution designed to manage clinical research data efficiently and securely. Here are some key features and benefits:

1. **Centralized Global Repository**: It consolidates clinical information into a single, secure repository, ensuring data integrity and compliance with regulatory standards

2. **Data Integration**: CAR supports the integration of diverse data sets from various sources like electronic data capture (EDC) systems, clinical data management systems (CDMS), labs, and contract research organizations (CROs)

3. **Collaboration**: The repository promotes collaboration across trials, phases, and therapeutic areas, both internally and with third parties

4. **Regulatory Compliance**: It complies with FDA's Title 21 CFR Part 11 and GxP standards, ensuring that all data handling meets industry regulations

5. **Audit Trails and Security**: CAR maintains detailed audit trails, secure logins, and role-based privileges to ensure data security and traceability

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Let's Get Started !

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URL to the SAS environment :

https://

User credentials :
Your eMail address
Your SAS Account Password

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Thank You !