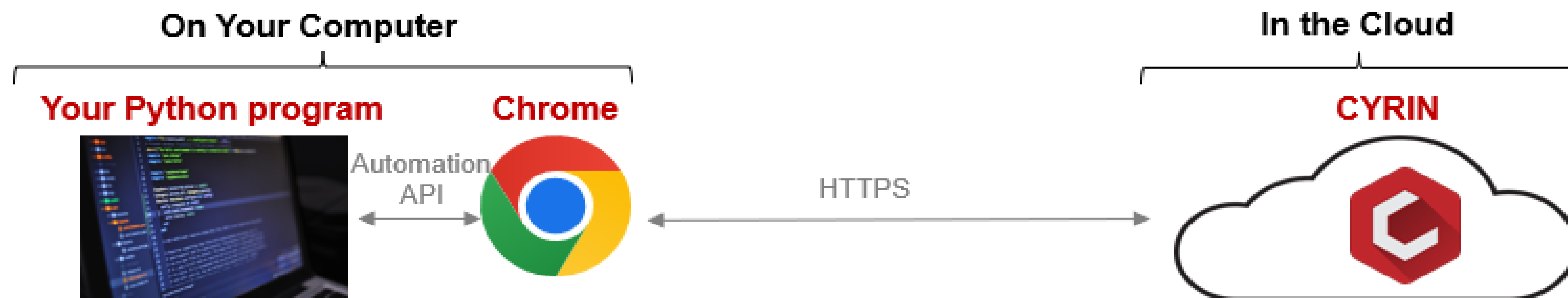


Virtual Machine Automated Testing Tools

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Sponsor: Architecture Technology Corporation (ATCorp)



Business Need

- CYRIN: online cyber training virtual environment
- Labs were not able to be checked to their full extent due to time constraints
- Labs must be tested after each update to ensure they work properly
- Creating automated tests removes the need to manually run through each lab

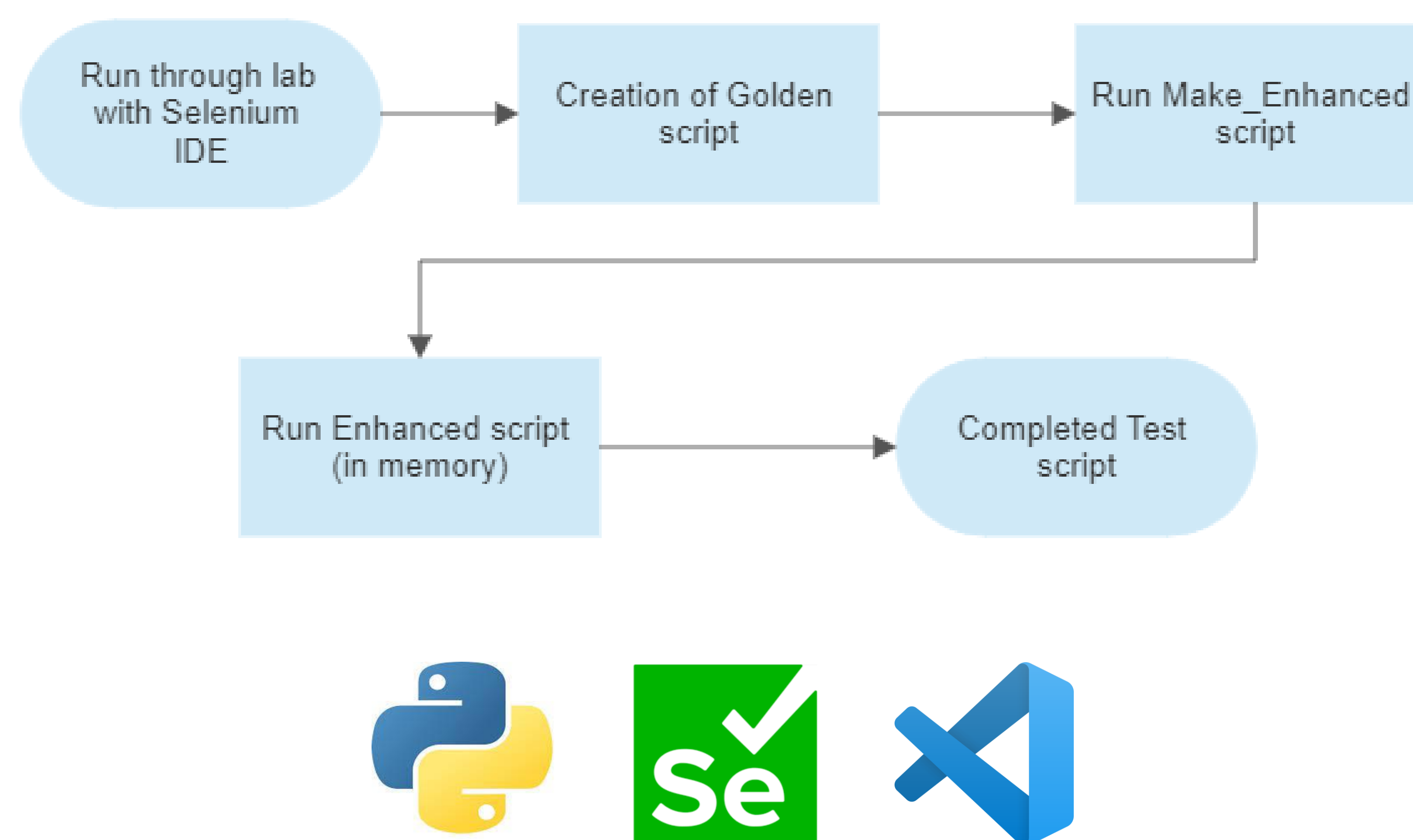


Intended Solution

- Create a tool that allows a test engineer to create automated tests for the labs.
- This will allow tests on future updates to be run automatically, without any user input.
- While this requires more time up front, it saves a lot of time in the long run.

Result: Test Creation Tool

1. Use Selenium IDE browser automation feedback to run through a lab
2. Obtain a Golden Script from the IDE
3. Run our Enhanced Script on the Golden Script which will go through and prompt for any missed keyboard inputs and mouse clicks
4. Obtain a fully automated Test Script for that lab that can be run on its own!



Challenges

- Visibility: Selenium views each virtual machine as one complete object
- New Technologies: Selenium, Python, Git
- Scope: maintaining manageable expectations

